County Borough of Blackburn.

ARTE ET LABORE

ANNUAL REPORT

UPON THE

Health of Blackburn,

FOR

THE YEAR 1895,

BY

JAMES WHEATLEY, M.D.,

Medical Officer of Health, Police Surgeon, and Medical
Superintendent of Fever and Small Pox
Hospitals.

BLACKBURN:
Printed by J. and G. Toulmin, 1896. Corporation Street.

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With Medical Officer of Health's Compliments.

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CORPORATION OF BLACKBURN.

MEMBERS OF THE HEALTH COMMITTEE.

THE MAYOR.

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,, COUNC. J. S WATSON (Vice-Chairman)
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,, ,, BILLINGTON
,, ,, NEWTON
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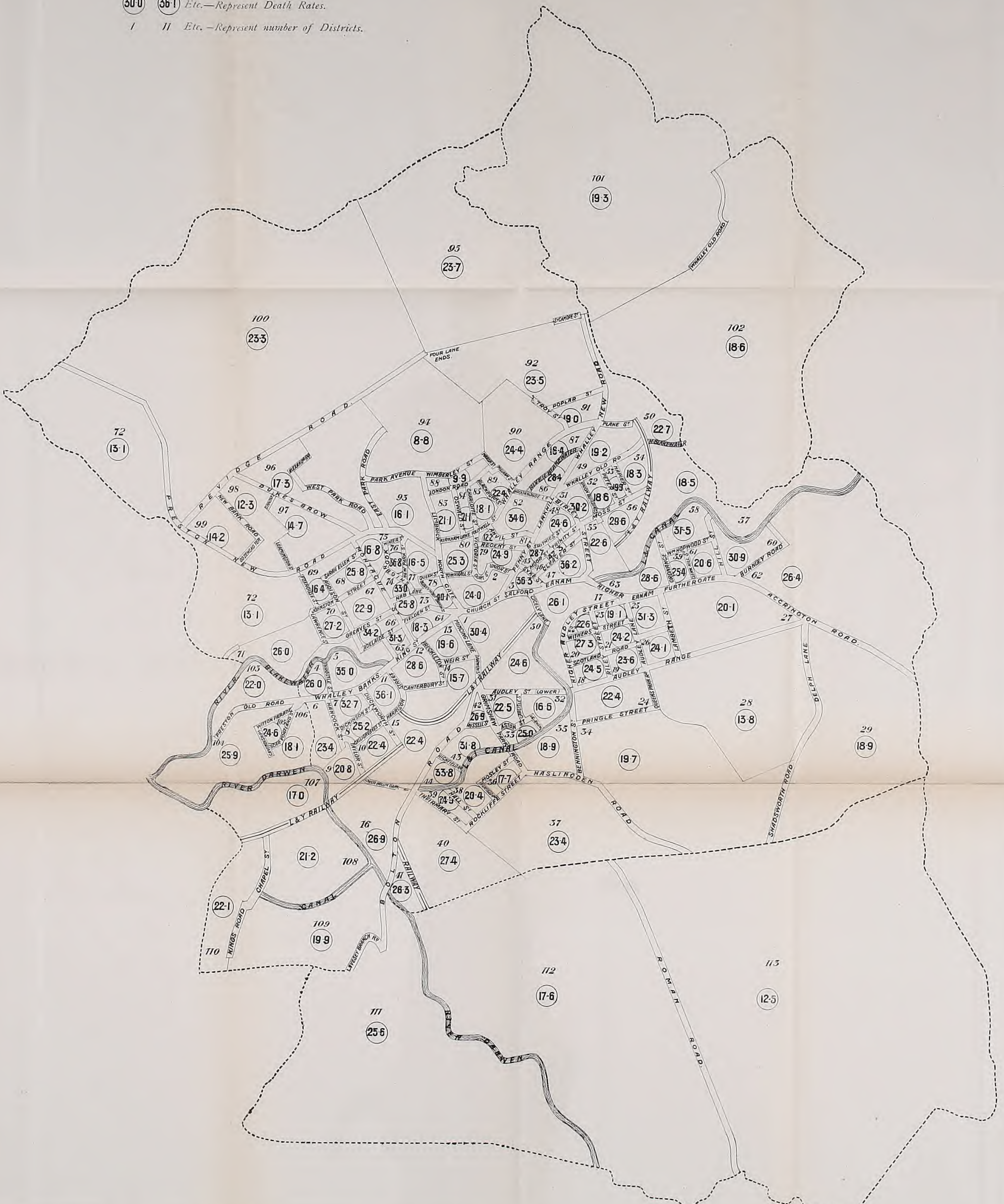
COUNTY BOROUGH OF BLACKBURN.

Divided into Enumeration Districts and shewing the Death-Rate in each District for seven years, 1889-1895.

(30·0) (36·1) *Etc.—Represent Death Rates.*

I *II* *Etc.—Represent number of Districts.*



G. H. DURHAM, LITH. BLACKBURN.

Public Health Office,

Blackburn,

June 4th, 1896.

To the Chairman and Members of the Health Committee of the County Borough of Blackburn.

Gentlemen,

I have the honour to submit to you, in accordance with the regulations of the Local Government Board, my Annual Report for the year 1895. It comprises the birth and death statistics, the measures adopted for the prevention of disease, and the work done by this department.

I am, Gentlemen,

Your Obedient Servant,

JAMES WHEATLEY.

VITAL STATISTICS.

Population.—The population based upon the 1891 census, and calculated to the middle of 1895 is 127,615. This population is probably too high. It is calculated upon the rate of increase that existed between 1881 and 1891 Since 1891 the natural increase has been on the average 1,118 for each year. Between 1881 and 1891 the natural increase was 1,317 for each year. As the town has in the meantime grown larger the natural increase should be greater instead of less. Assuming that the other sources of increase are in the same proportion the population would be 125,852. If an estimate be made from the number of houses that have been built since 1891, and it is assumed that each house is occupied by 4½ persons, the increase since 1891 would be 5,575 and the population would now be 125,639.

TABLE I.

Age Periods.	1881 Census		1891 Census.		Estimated to the middle of 1895.	
	M.	F.	M.	F.	M.	F.
Under 5	7,385	7.225	7,296	7,721	7,250	7·942
5 to 15	11,422	11.862	13.758	13.995	14,880	14,916
15 to 25	9,628	11,522	10,680	12,941	11,155	13.595
25 to 35	7,469	8,760	8,974	10,765	9,700	11.750
35 to 45	5,665	6.469	6,701	7·598	7,194	8,135
45 to 55	3,938	4,676	4,491	5,585	4 749	6,023
55 to 65	2.357	2,819	2,700	3·338	2 860	3,586
65 to 75	987	1,184	1,229	1,601	1,349	1,820
75 and upwards	282	364	285	406	286	425
Total............	49,133	54,881	56,114	63,950	59,423	68,192

TABLE II.

Births, Deaths, and Natural Increase of Population for 15 years, 1881-1895.

Birth.	Births.	Deaths.	Natural Increase.
1881	3,919	2,431	1,488
1882	3,918	2.665	1,253
1883	4,305	2,660	1,645
1884	4,132	2,663	1,469
1885	4,000	2,452	1,548
1886	4,004	2,863	1,141
1887	4,164	2,974	1,190
1888	4,111	2,865	1,246
1889	4,150	3,077	1,073
1890	4,015	2,882	1,133
1891	4,085	3,116	969
1892	3,883	2,551	1,332
1893	3,822	2.793	1,029
1894	3,621	2,173	1,448
1895	3,899	3,084	815
TOTAL	60,028	41,249	18,779

BIRTHS.

During the year there have been 3,899 births registered, compared with 3,621 in 1894, or an increase of 278.

Of the births 1,963 were males and 1,936 were females.

152 or 3·8 per cent. of the births were illegitimate.

Further particulars of the birth rate are set forth in tables III and VI.

TABLE III.

Total number of births during the four quarters for 1891, 1892, 1893, 1894, and 1895.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
1891	952	1090	1084	959	4085
1892	948	901	1082	952	3883
1893	959	1041	867	955	3822
1894	964	894	824	939	3621
1895	1061	1005	983	850	3899

The birth rate, which has been steadily decreasing for many years, has shown a slight increase.

DEATHS.

During the year there were 3,178 deaths registered, being 933 in excess of 1894. The deaths in the Workhouse and Infirmary belonging to districts outside the Borough have been deducted. The death-rate so corrected was 24·1 and without the reduction 24·9.

This death-rate is very high when compared with 1894, although not excessive when compared with previous years. It was no doubt partly due to the extraordinary and abnormal death rate of 1894. In my report of 1894 in speaking of the death-rate I said "The absence of any epidemic of consequence, the mildness of the summer, and the decreasing birth-rate are no doubt all factors in the production of this low death-rate. The occurrence of epidemics of measles and whooping cough in the present state of sanitary administration are certainly to a very great extent a matter of chance." This year two of these factors appeared in their worst form, viz. :—a most malignant epidemic of measles and a hot summer producing an epidemic of diarrhœa

TABLE IV.

Year.	Population at Census Years.	Population estimated to middle of year.	Death Rate.	Average death rate in 10 year periods.	Year.	Population at Census Years.	Population estimated to middle of year.	Death Rate.	Average death rate in 10 year periods.
1841	36,629	36,849	25·9	29·02	1871	76.339	76.695	26 5	27·38
1842	...	37,742	25·0		1872		78,136	26·2	
1843	...	38,656	31·5		1873		79,604	30 9	
1844	.	39,593	28·8		1874		81,099	29·9	
1845	...	40,552	27 7		1875		82,624	26 6	
1846	...	41,534	35 7		1876		84,175	28 9	
1847	...	42.541	33·9		1877		85.756	24·8	
1848	...	43,571	27·8		1878*		95,357	30·6	
1849	...	44 627	25 2		1879		97,223	24·2	
1850		45,708	28·7		1880		102529	25·2	
1851	46,536	46,892	27·0	29 47	1881	104014	104388	22 4	23 83
1852	...	48,344	35·1		1882		105897	24·3	
1853	...	49,841	35 2		1883		107427	23 9	
1854		51,384	25 6		1884		108980	23 6	
1855	...	52 974	33 6		1885		110555	21·3	
1856	...	54,614	24·3		1886		112153	24 7	
1857	...	56.306	32 2		1887		113774	25·3	
1858	...	58,049	31 8		1888		115418	24 0	
1859	...	59,846	25·8		1889		117086	25·4	
1860	...	61,699	24·1		1890		118780	23·4	
1861	63,126	63,434	27·9	27·83	1891	120064	120496	24·9	21·9
1862	...	64,681	28·1		1892		122240	20 8	
1863	...	65,953	21·8		1893		124006	22·5	
1864	...	67,249	25·9		1894		125787	17 2	
1865	...	68,572	27 4		1895		127615	24·1	
1866	...	69,920	30 7						
1867	..	71,294	27 5						
1868	...	72,696	26·9						
1869	...	74,125	31·5						
1870	...	75,583	30·6						

* Part of Witton and Livesey added.

TABLE V.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTALS.
Measles	...	...	...	2	1	...	11	53	32	91	91	43	324
Diphtheria.........	1	4	...	...	...	1	...	...	...	1	...	...	7
Scarlet Fever......	...	...	...	..	...	2	...	...	...	4	...	2	8
Whooping Cough	8	3	9	10	7	7	5	8	6	6	2	...	71
Typhoid Fever ...	1	5	2	1	4	1		1	6	2	3	2	28
Influenza	1	3	19	16	3	2	3	2	...	2	3	...	54
Diarrhœa	3	3	2	9	5	5	5	57	92	80	15	4	280
Phthisis	4	14	23	17	18	17	9	7	7	15	17	12	160
Heart Disease ...	13	14	21	11	14	8	14	14	13	16	8	11	157
Croup	2	1	1	..	...	3	1	...	2	2	3	2	17
Pneumonia and Pleurisy	14	20	26	24	30	12	12	16	16	15	33	16	234
Bronchitis	32	30	59	28	28	15	25	19	14	39	36	24	349
Other Diseases ...	104	113	141	131	118	90	103	119	120	156	103	97	1395
TOTAL.........	183	210	303	249	228	163	188	296	308	429	314	213	3084

TABLE VI.

WARDS.	Population.	Deaths	Births.	Death Rate.	Birth Rate.	Deaths under one year per 1000 Births.	Death rate from six Zymotic Diseases	Death rate from Diarrhœa.	Death rate from Bronchitis and Pneumonia.	Death rate from Phthisis.
ST. MARY'S ..	2022	58	39	28·6	19·2	307	1·4	1·9	4·9	2·9
ST. PAUL'S ...	15810	458	487	28 9	30·8	285	4·6	2·6	5·5	1·5
ST. JOHN'S ...	25464	453	686	17·7	26·9	167	2·3	0·9	3·8	0·7
TRINITY	21894	532	751	24·2	34 3	225	2·9	2·3	4·6	1·1
PARK	33654	883	1113	26·2	33·0	247	3·6	2 7	4·7	1·6
ST. PETERS ...	13497	392	430	29·0	31 8	281	4·8	2·8	5·2	1·5
ST. MARK'S ...	15274	308	393	20·1	25·7	226	3·2	1·7	3·3	0·7
BOROUGH......	127615	3084	3899	24·1	30·5	235	3·4	2·1	4 5	1·2

The deaths occuring in the Workhouse and Infirmary have been referred to the Districts to which they belonged before being admitted to these Institutions.

TABLE VII.

Towns.	Birth rate.	Death rate.	Deaths under 1 year per 1,000 births.	Death rate over one year.	Death rate fr'm the six Zymotic diseases	Death rate Diarrhœa.	Death rate from Violence.	Death rate from Inquest	Death rate f'rm uncertified causes.
London ...	30·4	19·7	165	14·7	1·8	0·8	0·7	1·7	0·1
West Ham	34·2	17·8	168	12·0	2·3	0·8	0·5	0·8	0·4
Croydon ...	25·1	14·4	134	11·0	0·7	0·5	0·5	1·2	...
Brighton...	25·5	18·8	164	14·6	0·8	0·8	0·4	0·8	0·3
P'rtsmouth	27·9	17·7	174	12·9	0·9	1·1	0·5	1·2	0·1
Plymouth .	28·6	20·0	178	14·9	1·3	0·5	0·3	1·1	0·05
Bristol......	28·8	18·0	143	13·8	0·5	0·7	0·5	1·4	0·1
Cardiff......	34·1	18·1	178	12·0	1·1	1·2	0·8	1·3	0·1
Swansea ...	33·3	18·2	177	12·2	1·0	0·6	0·6	1·2	0·2
W'hmpton.	35·3	24·3	217	16·6	2·6	1·5	0·6	1·3	0·1
B'rminghm	32·2	20·2	182	14·3	1·4	1·2	0·7	0·6	0·9
Norwich ...	31·7	19·2	190	13·2	1·2	1·4	0·5	1·2	0·3
Leicester...	30·7	17·1	202	10·9	1·0	1·9	0·4	0·9	0·7
Nottingh'm	29·6	18·8	189	13·3	0·6	1·5	0·6	1·0	0·2
Derby	29·0	16·6	160	11·9	0·6	1·2	0·5	1·6	0·07
Birkenhead	30·5	19·4	173	14·1	1·3	0·9	0·6	1·4	0·2
Liverpool ..	36·7	28·7	210	20·9	2·3	1·6	1·4	1·9	0·8
Bolton......	32·8	23·8	211	16·9	2·3	2·0	0·6	1·5	0.07
Manchester	33·5	25·1	203	18·3	2·1	1·5	0·9	1·8	0.3
Salford ...	35·7	25·5	230	17·3	2·8	2·1	0·7	1·3	0.5
Oldham ...	27·4	21·9	189	16·7	1·7	1·0	0·5	1·2	0.07
Burnley ...	32·0	23·3	242	15·5	1·7	2·1	0·5	0·8	0.4
Blackburn	**30·5**	**24·1**	**235**	**16·9**	**3·4**	2·1	**0·5**	**0·8**	**0.7**
Preston ...	33·3	23·8	248	15·5	1·1	2·5	0·6	0·7	0.8
Hudd'sfield	21·6	16·8	157	13·4	0·7	0·4	0·4	0·6	0.5
Halifax ...	23·3	19·2	157	15·5	0·7	0·5	0·4	1·0	0·3
Bradford...	26·0	19·8	202	14·5	0·9	1·5	0·4	1·1	0·2
Leeds	31·5	20·4	193	14·3	1·1	1·5	0·7	1·6	0·1
Sheffield ...	34·7	20·4	196	13·5	1·2	1·8	0·5	0·8	0·6
Hull	34·1	20·7	205	13·7	0·8	2·4	0·6	0·9	0·8
Sunderland	34·9	21·7	188	15·1	1·6	1·8	0·7	1·4	0·2
Gateshead.	34·4	19·5	186	13·1	1·4	1·1	0·5	1·5	0·1
Newcastle .	31·0	20·4	186	14·1	1·5	0·9	0·8	1.8	0·2

TABLE VIII.

Towns.	Recorded Death Rate 1895.	Factor for Correction for Sex and Age Distribution.	Corrected Death Rate 1895.	Comparation Mortality figure 1895.
England and Wales	18·7	1.0000	...	......
London	19·7	1·0656	20·9	1117
West Ham	17·8	1·0788	19·2	1026
Croydon	14·4	1·0424	15·0	802
Brighton	18·8	1·0110	19·0	1016
Portsmouth	17·7	1·0224	18·0	962
Plymouth	20·0	0·9720	19·4	1037
Bristol	18·0	1·0447	18·8	1005
Cardiff	18·1	1.1159	20·1	1074
Swansea	18·2	1·0924	19·8	1058
Wolverhampton	24·3	1·0464	25·4	1352
Birmingham	20·2	1·1050	22·3	1192
Norwich	19·2	0·9579	18·3	978
Leicester	17·1	1·0855	18·5	989
Nottingham	18·8	1·0752	19·2	1026
Derby	16·6	1·1031	18·3	978
Birkenhead	19·4	1·0993	21.3	1139
Liverpool	28·7	1·1094	31·8	1700
Bolton	23·8	1·1331	26·9	1438
Manchester	25·1	1·1331	28·4	1518
Salford	25·5	1·1244	28·6	1529
Oldham	21·9	1·1453	25·0	1336
Burnley	23·3	1·1487	26·7	1427
Blackburn	**24·1**	**1·1231**	**27·0**	**1443**
Preston	23·8	1·0993	26·1	1395
Huddersfield	16·8	1·1627	19·5	1042
Halifax	19·2	1·1133	21·3	1139
Bradford	19·8	1·1446	22·6	1208
Leeds	20·4	1·1082	22·6	1208
Sheffield	20·4	1.1120	22·6	1208
Hull	20·7	1·0504	21·7	1160
Sunderland	21·7	1·0493	22·7	1213
Gateshead	19·5	1·0740	20·9	1064
Newcastle	20·4	1·0892	22·2	1187

TABLE IX.

Showing Population, Birth-rates, and Death-rates, for the last 15 years.

Year.	Estimated Population.	Birth Rate.	Death Rate.	Zymotic Death rate including Diarrhœa.	Death-rate from Bronchitis, Pneumonia, & Pleurisy.	Death rate from Phthisis.	Deaths under one per 1000 Births.
1881	104,388	37·5	22·4	2.3	5·3	1·9	181
1882	105,897	36·9	24·3	4·1	5·6	1·8	205
1883	107,427	40·0	23·9	2.5	6·2	1·9	185
1884	108,980	37·9	23·6	3·6	4·4	1.7	173
1885	110,555	36·1	21·3	2·1	4·6	1·3	142
1886	112,153	35·6	24·7	3·8	4·4	1·8	157
1887	113,774	36·5	25·3	4·0	5·8	1·5	204
1888	115,418	35·6	24·0	3·9	5·8	1·5	190
1889	117,086	35·5	25·4	5·1	6·8	1.5	221
1890	118,780	33·8	23·4	2·8	7·0	1.8	194
1891	120,496	33·9	24·9	3·2	7·5	1.3	207
1892	122,240	31·7	20·8	2·1	5·1	1.0	199
1893	124,006	30·8	22.5	4·0	5·2	1·0	241
1894	125,797	28.7	17·2	1.5	3·8	1·1	168
1895	127,615	30·5	24·1	5.6	4·5	1·2	235

TABLE X.—Deaths and Death-rates at Age Periods for 7 years.

Age Periods.	1889.		1890.		1891.		1892.		1893.		1894.		1895.	
	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate
0 to 5	1532	102·5	1105	73·7	1380	91·8	1067	70·6	1363	90·2	880	58·0	1521	100·1
5 to 15	141	5·2	117	4·2	120	4·3	105	3·6	99	3·4	97	3·3	120	4·0
15 to 25	140	6·0	157	6·7	132	5·5	111	4·6	112	4·6	112	4·5	117	4·7
25 to 35	163	8·5	189	9·7	163	8·2	130	5·4	132	6·4	130	6·2	148	6·9
35 to 45	201	14·4	279	19·7	227	15·7	208	10·3	203	13·6	171	11·3	206	13·4
45 to 55	241	24·5	270	27·0	288	28·4	228	22·2	206	19·7	214	19·9	252	23·4
55 to 65	292	49.6	350	58 6	367	60·5	279	45·3	282	45·1	242	38·1	296	45·9
65 to 75	253	93·6	274	98·7	311	109·1	280	95·5	261	86·9	219	71·0	271	85·5
75 & up.	114	167·4	141	205·2	128	184·9	133	190·8	135	192·3	108	152·9	153	215·1

TABLE XI.

Age Periods.	1895.				1889 TO 1895.			
	Males.		Females.		Males.		Females	
	Deaths	Death Rate.	Deaths	Death Rate.	Deaths	Death Rate	Deaths	Death Rate.
0 to 5	810	111·7	711	89·5	4862	95·3	3,986	73·1
5 to 15	60	4·0	60	4·0	417	4·2	382	3·8
15 to 25	57	5·1	60	4·4	423	5·5	458	4 9
25 to 35	58	5·9	90	7·6	467	7·2	589	7·6
35 to 45	101	14·0	105	12·8	756	15·7	739	13·6
45 to 55	120	25·2	132	21·9	887	27·7	822	20 5
55 to 65	145	50·7	151	42·1	1037	53·8	1,071	44·8
65 to 75	129	95·6	142	78·0	918	03 8	951	81·7
75 & up	61	213·2	92	216·4	424	12·5	486	168·9

These tables are published because they have some bearing upon the healthiness of weaving. The great majority of weavers are between the ages of 15 and 35. Their numbers are so great that any excessive mortality amongst them would perceptibly affect the mortality of the borough at these age periods. This table shows that at these age periods the rates are comparatively low. It will also be observed that between 15 and 25 the male death-rate exceeds the female, and that this is reversed between 25 and 35.

TABLE XII.

Analysis of Deaths Under One Year of Age for the last Six Years

	1890		1891		892		1893		1894		1895	
	Deaths	*Rate per 1000 Births*	*Deaths*	*Rate per 1000 Births*	*Deaths*	*Rate per 1000 Births*	*Deaths*	*Rate per 1000 Births*	*Deaths*	*Rate per 1000 Births*	*Deaths*	*Rate per 1000 Births*
Six Zymotic Diseases	12	2·9	75	18·3	62	15·9	59	15·4	29	8·0	107	27·4
Diarrhœa	108	26·8	90	22·0	78	20·0	190	49·7	58	16·0	211	54·1
Lung Diseases	154	38·3	197	48·2	153	39·4	172	45·0	103	28·4	124	31·7
Convulsions	129	32·1	100	24·4	98	25·2	85	22·2	68	18·7	63	16·1
Tuberculosis	60	14·9	50	12·2	60	15·4	81	21·1	45	12·4	59	15·1
Debility, Atrophy, Inanition	78	19·4	38	9·3	48	12·3	23	6·0	73	20·1	45	11·5
Premature Birth, Developmental ...	109	27·1	150	36·7	154	39·6	111	29·0	87	24·0	115	29·4
Dentition	17	4·2	41	10·0	20	5·1	7	1·8	11	3·0	26	6·6
All Others... ...	122	30·3	107	26·1	103	26·5	194	50·7	135	37·2	170	43·6
All Causes	782	194·7	848	207·5	776	199·8	922	241·2	609	168·0	920	235·9

TABLE XIII.

Deaths under one year of age for the four quarters.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
1895	163	167	292	298	920
1894	135	137	157	180	609
1893	184	182	339	217	922
1892	207	169	225	175	776
1891	179	244	213	192	828
1890	191	147	193	251	782

The excessive death rate amongst children was confined to the latter half of the year, being due mostly to measles and diarrhœa.

INFANTILE MORTALITY.

The death-rate under one year of age, which was low in 1894, rose to 235, or nearly as high as in 1893.

The causes of death are set forth in the accompanying tables. Table xii shows that the great excess over 1894 was due to epidemics of measles and diarrhœa. These epidemics are dealt with under their respective headings.

In our enquiries into deaths from measles it was found that nearly 85 per cent. of the children were nursed by their mothers. In many cases they stayed away from the factories whilst the the children where ill. A certain number, however, were carried backwards and forwards to a neighbours house, even during the illness.

I mention elsewhere that of the children who died from diarrhœa, nearly 80 per cent. had been fed on the bottle. Hand feeding of young infants requires considerable knowledge and great care in order to be successful. The female factory-worker is almost althogether ignorant of any sort of domestic work. She is sent to the mill immediately on leaving school, and consequently has little opportunity of picking up any knowledge which will help her in bringing up her children.

I am sorry to say that the crêche which was started by Mr. Eli Heyworth has been given up. There seem to be very great difficulties in the way of successfully conducting such institutions.

Instructions for the feeding of infants are being circulated freely, and it is hoped that in time they will have beneficial results.

A committee has been appointed by the House of Lords to enquire into the nursing of children away from home. It is to be hoped that it will recommend something which will enforce the skilled nursing of infants where mothers have to be away from home to attend to work.

TABLE XIV.

28 Large Towns.	Deaths Under One Year to a 1,000 Births Registered.											Average.
	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	
London	148	159	158	146	141	163	154	154	164	143	165	154
Brighton	131	160	149	148	131	165	129	151	169	138	164	148
Portsmouth	131	174	143	134	139	135	138	155	164	131	174	147
Norwich	136	202	158	165	164	183	159	181	195	164	190	172
Plymouth	156	154	196	164	166	161	180	137	169	168	178	166
Bristol	152	149	149	123	146	151	139	147	141	149	143	144
Wolverhampton	140	175	176	168	181	175	187	172	208	165	217	178
Birmingham	157	175	176	149	170	184	171	165	198	163	182	171
Leicester	193	216	215	203	208	197	214	197	220	162	202	202
Nottingham	157	180	170	151	182	160	170	167	170	173	189	169
Derby	137	150	142	143	149	158	139	173	156	123	160	148
Birkenhead	137	162	156	152	170	166	148	168	196	142	173	161
Liverpool	174	188	186	168	188	196	188	180	211	179	210	188
Bolton	160	186	171	173	166	176	164	185	19	161	211	177
Manchester	175	183	191	177	176	188	192	178	203	159	203	184
Salford	174	198	195	184	182	200	194	185	210	173	230	193
Oldham	166	174	187	150	178	180	193	176	187	160	189	176
Blackburn	**142**	**157**	**204**	**190**	**221**	**194**	**207**	**199**	**241**	**168**	**235**	**196**
Preston	219	233	214	188	265	245	232	216	269	203	248	230
Huddersfield	157	167	181	157	167	169	177	149	141	169	157	162
Halifax	132	171	153	154	175	170	169	159	173	134	157	158
Bradford	143	167	178	154	183	170	186	154	197	144	202	170
Leeds	155	181	172	173	177	172	177	168	206	155	193	175
Sheffield	164	168	177	178	174	194	170	170	191	156	196	176
Hull	128	164	165	139	184	159	172	165	206	141	205	166
Sunderland	158	151	151	132	181	172	178	156	188	166	188	165
N'wc'stle-on-Tyne	172	155	174	136	174	170	174	150	174	156	186	165
Cardiff	189	168	172	143	157	167	146	163	179	141	178	164

TABLE XV.

DEATHS UNDER ONE YEAR ARRANGED ACCORDING TO DAYS, WEEKS AND MONTHS.

	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8	8 months to 9.	9 months to 10.	10 months to 11.	11 months to 12.	Total.
Six Zymotic Diseases	...	..	1	...	.	...	...	1	...	...	1	2	2	2	4	3	9	9	13	12	14	18	19	107
Diarrhœa	...	...	...	...	...	...	...	..	2	3	5	10	21	23	27	19	18	15	24	16	17	12	9	211
Lung Diseases	...	...	1	...	...	...	...	1	1	...	1	3	11	8	9	9	12	17	15	7	9	11	11	122
Convulsions	1	1	1	...	1	...	1	5	12	3	4	24	8	5	7	5	2	3	3	3	..	1	2	63
Tuberculosis	...	...	...	...	...	..	...	.	...	...	...		5	8	5	5	5	11	5	4	4	2	3	57
Debility, Atrophy, Inanition	8	5	...	...	1	1	2	17	5	5	5	32	3	7	3	3	2	1	...	..	1	..		52
Premature Birth	38	18	9	4	3	3	...	75	8	7	3	93	6	2	...	...	...	.	1	...	...		...	102
Dentition	...	...	..	...	..	..	...	...	...	...	...	...	...	...	...	...	3	3	6	3	4	4	3	26
All Others	8	4	3	4	1	1	2	24	6	7	4	41	20	17	16	20	15	6	9	13	11	6	6	180
All Causes	55	28	15	8	6	6	5	123	34	25	23	205	76	72	71	64	66	65	76	58	60	54	53	920

TABLE XVI.

DISEASES.	1891.		1892.		1893.		1894.		1895.	
	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate	Total Deaths	Death Rate
1. Zymotic (including Diarrhœa	527	4·3	349	2·8	592	4·7	258	2·0	763	5·9
2. Parasitic	1	0·008	...	...	1	0·008	...	...	1	·007
3. Dietetic.........	47	0·39	62	0·50	30	0·24	26	0·20	32	·2
4. Constitutional	346	2·8	322	2·6	375	3·0	330	2·6	470	3·6
5. Local	1736	14·4	1369	11·1	1414	11·4	1186	9·4	1401	10·9
6. Developmental	339	2·8	342	2·6	217	1·7	65	1·3	209	1·6
7. Violent Deaths	80	0·66	67	0·54	49	0·39	64	0·5	63	·4
8. Not specified or ill defined	40	0·33	40	0·32	115	0·92	144	1·1	145	1·1
	3116	25·8	2551	20·8	2793	22·5	2173	17·2	3084	24·1

TABLE XVII.

Shewing number of cases of Infectious Diseases notified from 1881 to 1895.

Disease.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Small Pox...........	28	4	4	...	4	28	42	98	...	...	...	4	79	13	...
Scarlet Fever... ..	103	331	275	211	181	422	1695	829	737	324	196	176	190	156	224
Diphtheria...........	...	...	...	...	...	...	...	...	4	5	1	3	2	38	31
Enteric Fever	289	210	442	268	135	105	153	146	111	121	106	79	161	129	119
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	420	545	721	479	320	555	1890	1073	852	450	303	262	432	336	375

TABLE XVIII.

	33 Large Towns.	Blackburn.
Seven Zymotic Diseases	2·8	5·6
Measles	0·5	2·5
Scarlet Fever	0·1	0·06
Whooping Cough	0·3	0·5
Typhoid Fever	0·1	0·2
Diarrhœa	1·1	2·1
Diphtheria	0·3	0·05
Small Pox	0·01	...

MEASLES.

There were 324 deaths from Measles compared with 13 last year. The epidemic was one of exceptional severity, not only in Blackburn but in many of the surrounding districts. It has proved more fatal than any epidemic of Measles during the last 25 years.

CHART I.

WEEKLY DEATHS FROM MEASLES.

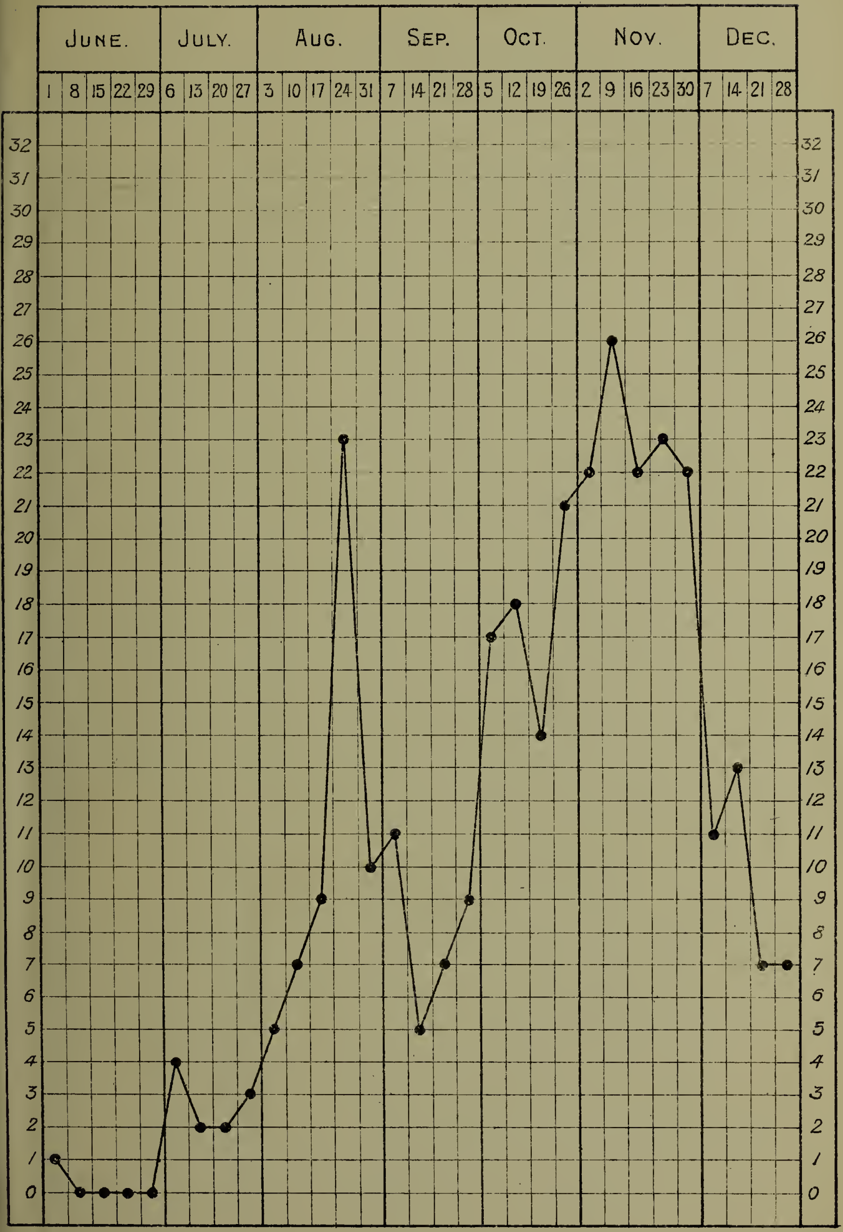


Table showing deaths and death-rates from Measles from 1871 to 1895.

Year.	Total Deaths.	Death Rate	Year.	Total Deaths.	Death Rate
1871	61	0·8	1884	92	0·8
1872	31	0·3	1885	1	0·009
1873	119	1·4	1886	195	1·7
1874	142	1·7	1887	76	0·6
1875	29	0·3	1888	117	1·0
1876	167	1·9	1889	188	1·6
1877	48	0·5	1890	15	0·1
1878	25	0·2	1891	173	1·4
1879	37	0·3	1892	8	0·06
1880	74	0·7	1893	140	1·1
1881	9	0·08	1894	13	0·01
1882	167	1·5	1895	324	2·5
1883	1	0·009			

Measles during this period has shown no tendency to decrease, in fact the death rate for the latter half is slightly in excess of the former. It will be noticed that the epidemics occur with remarkable regularity every two years, especially since the year 1881. The meaning of this is simply that an epidemic breaks out as soon as the children that are unprotected form what has been called an explosive ratio : that is, as soon as the number of unprotected children reaches a certain proportion of the total children.

I have already pointed out in a previous report that it is probable that few children escape measles in this town. The influence of schools in spreading the disease could be traced as clearly as in previous epidemics, and the limitation to infant schools was well marked.

Our information was so imperfect that it is not possible to trace accurately the spread of the disease. The first deaths occurred in the week ending April 27th. Except for these two, and one in the week ending June 1st there was no death until the week ending July 4th. For the month of July the deaths were almost entirely confined to St. John's Ward and practically to St. John's School. Unfortunately the fact that there was a large number of cases at this school did not come to our knowledge until it was too late for any satisfactory action. The only other school affected at this time, and that not nearly to the same extent, was Cedar Street, and afterwards St. Paul's. The disease spread somewhat slowly towards the south and west. During the holidays, at the beginning of August, we had practically no means of judging whether the disease was increasing or not, but after the holidays it was seen that several schools had been invaded. The attendance at St. Ann's School, which was fair on opening, rapidly fell off. By the middle of October measles had spread to the extreme south and west, but it was not until November that the epidemic extended towards the east part of the town. Hitherto Audley district, Furthergate, and Little Harwood had remained comparatively free, but the invasion was rapid, and by the middle of November these districts were badly attacked. The school which remained unaffected the longest was Furthergate, and perhaps it affords the clearest evidence, although negative of the spread of measles by schools that can be obtained from this epidemic.

Deaths from measles in age periods:—

0 to 1	1 to 5	5 to 10	10 to 15
73	237	13	1

It will be seen from this table that the majority of the deaths were amongst very young children, in fact amongst children below school age This does not, of course, mean in any way that these cases have not been spread by the schools in the first place. In a very large proportion of the infected houses the first child to commence was a child attending school.

The following is an analysis of 1,210 cases visited by the inspectors:—

Number of Houses Visited.	Number of Houses where Doctor Attending.	Cases in House.					
		1	2	3	4	5	6
916	425	708	143	47	15	3	—

Perhaps the most interesting feature of this table is the proportion of cases attended by medical men. It has, of course, a very important bearing upon the question of notification of measles. With regard to the other figures, it must be remembered that these numbers were obtained at one visit only—probably later on the number 708 single cases would be very much reduced by illness of other children in the house.

The extraordinary severity of the epidemic may be judged from the number of deaths, and when one examines the figures more closely it becomes even more apparent. The disease was mostly confined to children under five years of age. Roughly speaking there are about 15,000 children under five years of age in the town, and an ordinary case mortality from measles is about two-and-a-half to three per cent. If this rate of mortality had prevailed there would have been between 10,000 and 13,000 cases, or about three.quarters of the total number of children under five years of age. As far as one can judge this number is very much in excess of the truth. Probably there were not more than half to a third that number, which means that the case mortality was two to three times the normal, or from about six to eight per cent.

Not only were the cases severe, but they frequently departed much from their normal type. Perhaps none of the peculiarities are more interesting than the tendency which the disease showed to attack children who had previously had measles. As a general rule children who have had measles are protected from future attacks. In this epidemic the exceptions were so common as to suggest that there were two diseases prevalent at the same time. Not only were children attacked who had had measles in a previous epidemic, but also children who had suffered in the early part of this same epidemic. Sometimes one illness followed another so rapidly as to be more of the nature of a relapse. The following are a few instances illustrating the various periods between two attacks, and the difference in the character of the attacks :—

(1) C.S. Rash appeared November 15th, and was accompanied by running at eyes and nose—blotches very large, and over whole body ; 2nd rash appeared

November 28th, accompanied by recurrence of running at eyes and nose, also running from both ears and bronchitis.

(2) C.E. First rash about July 30th, second rash about November 14th. The blotches of the second rash were much larger. There was the usual running at eyes and nose with both.

(3) M.R. First attack two years ago; 2nd attack, November, 1895.

(4) M.A. had had a well marked attack of measles at the beginning of September, and recovered. About the middle of October commenced to be ill with high temperature, running at eyes and nose, and in a day or two a well-marked rash appeared. The second attack was complicated with bronchitis, laryngitis and discharge from ears, and the child died about six days from the commencement of illness.

These are not very extraordinary in themselves as isolated cases, but they gain their significance from the fact that they are examples of a large number of others. Other peculiarities were the the remarkably free desquamation that usually followed, and the frequency with which discharging ears complicated the cases. These two last symptoms made it all the more difficult to distinguish them from Scarlet Fever.

The disease did not show quite the same tendency as in former epidemics to a rapid rise and a rapid fall. It was slower in asserting itself but maintained its virulence for a much longer period of time.

Only one death from Measles occurred in that part of the town north of Preston New Road and west of Duke's Brow. This was not because there were no cases in this district, for St. Silas's School which is the principal school in this neighbourhood was attacked very severely. In this part of the town the dwellings and the people are in a better position. The inference to be drawn from this is that much of the danger of Measles is due to insanitary conditions and especially neglect. The result of the inspection of the houses where deaths took place did not however reveal anything very startling with regard to sanitary defects.

In order to form some idea as to who nursed the sick, I caused inquiries to be made. Of 223 deaths from measles that were visited, 188 were nursed at home by the mother, 25 at home by other persons, and 10 in other houses. Of course the last is the most objectional proceeding. Other enquiries were directed to finding out at what period of the illness a medical man was called in, but I am afraid the information obtained was not reliable. The duration of illness before death was also enquired into with the following result :—

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	12th	week
78	82	26	6	3	0	3	1	1	1	

The large number of deaths in the first week seemed to indicate that many of the cases were fatal from the intensity of the disease apart from complications. The average duration of the disease in those cases that terminated fatally was short.

Having described to you the course of the epidemic, and its features, I propose to put before you the steps taken in order to prevent its spread, and afterwards to draw inferences as to the utility of these or other measures.

In June there was some reason for thinking that measles was beginning to increase in the town; I therefore addressed the following letter to the school masters of the various schools.

Dear Sir,—If there are any cases of measles amongst children attending your school, will you kindly let me have their names and addresses as early as possible? I am afraid there are signs of another epidemic, and wish to get information early.

Yours faithfully,
JAMES WHEATLEY,
Medical Officer of Health.

No notifications were received in response to this letter, and I came to the conclusion that probably I had been mistaken. At the beginning of July my attention was called to St. John's School, which had by this time become so infected that in my opinion closure was useless. By visiting the different schools information of a kind was obtained—lists of absentees were got and visited. It was, however, found that our knowledge of the cases was frequently very late and of little use

In order to consider the better notification of measles and whooping cough from the schools, a meeting of the Managers, together with the Chairman, Vice-Chairman of the Health Committee, and Medical Officer of Health was held.

At the meeting about twenty schools were represented, and the following resolutions were passed :—

1. That in the opinion of this meeting of Day School Managers it is desirable that information of all cases or suspected cases of Measles and Whooping Cough occurring amongst children attending school, should be promptly notified to the Medical Officer of Health.

2. That the Day School Managers present hereby agree to instruct the Teachers of the schools they respectively represent to promptly furnish such information to the Medical Officer of Health, on forms supplied by him for the purpose.

3. That a copy of the foregoing resolutions be forwarded to the Managers of the various Day Schools in the Borough.

Notification forms and stamped and directed envelopes were forwarded to the various schools. About 378 notifications were sent during the next four weeks. The notifications were of great help, for by their means one was cognisant at once of any fresh attack in a school, or of any sudden increase. As I have pointed out previously, if a school is to be closed for Measles it should be done early. It is no use waiting until 10 or 20 per cent. of the children are attacked, for by that time probably the disease has pretty nearly spread through the whole school. On the other hand, to close a school because there are one or two cases, may be to do it quite unnecessarily. The only rational way is to observe the schools carefully day by day, and apply the knowledge gained by the spread in one school to treatment of a neighbouring one. Any sudden increase is often quite sufficient to determine one, although the same number of cases spread over a longer time would not have the same significance.

For these and many other reasons it is quite essential that prompt notification should be received. Later in the epidemic it was possible to watch the development of measles and to close the schools before they became much infected. The question arises as to whether it would not be advisable to close all the schools at once when an epidemic is threatening. There is no doubt that in a small town or village this course is often advisable, and in a large town all the schools might be closed in the immediate neighbourhood of the infected district, but I think it is of very doubtful utility to close schools at considerable distance from infected areas. There is no doubt that at the early part of the epidemic we were much in the dark about the number and distribution of the cases of measles. This was due to the fact that there was no notification of measles by either householders or medical men. I have previously advocated notification by householders of measles and whooping cough, but there seems to be no probability of getting this. At present we are trying notification by the schools, a method which, I think, should prove fairly successful. It, of course, gives the school authorities some trouble, but it lessens the amount of infectious disease in their schools, the benefit should far more than recompense them. We shall not get to know all the cases in this way, but the same objection may be raised to the notification by the medical attendant. Of 916 cases visited, 425, or 46 per cent., were being attended by a medical man. This, I have reason to believe, is above the usual percentage, and no doubt the percentage of cases attended in a grave epidemic like last year will be greater than in a mild one It is very probable, however, that notification would increase the number of cases having medical attention. Whether compulsory notification is desirable or not it should certainly not be adopted during an epidemic, as its chief value is at its commencement, nor should it be adopted without very careful consideration of what it entails. Before this step is taken I think notification through schools should have a fair trial.

The following are the schools that were closed on account of measles :—

St. Silas
St. John's
Cedar Street
Moss Street
St. Ann's
Factory School, Lower Darwen
Griffin
Bank Top
Holy Trinity
St. Michael's
Furthergate
Park Road
St. Stephen's
St. Thomas's
St. Matthew's
St. Joseph's
Maudsley Street
Audley Range
St. Peter's R.C.
Mill Hill
St. Barnabas's
Wensley Fold
Witton
All Saints

WHOOPING COUGH.

There were 71 deaths from whooping cough compared with 43 in 1894.

SCARLET FEVER.

There were 224 cases of scarlet fever compared with 156 in 1894. There were only 8 deaths making a low death rate of ·06. There were no distinct epidemics traceable to schools, although it seemed very probable that several children were infected whilst at school. No cases were traced to milk supply.

Although there has been a slight increase of Scarlet Fever, there has been nothing approaching an epidemic and this makes the sixth year of comparative immunity. Some overlooked cases have come to my knowledge, and these no doubt, have been accountable for other cases.

Isolation is now insisted upon much more strictly, and the people generally are beginning to understand better the importance of it.

The following are the cases in the months they occurred.

Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec
17	10	21	10	17	42	23	23	11	22	20	8

There was a sudden increase in June, just at the beginning of the epidemic of measles.

Age Periods	0—1	1—5	5—10	10—15	15 & up.
Notified Cases	1	99	100	19	5
Deaths	...	5	3	...	...

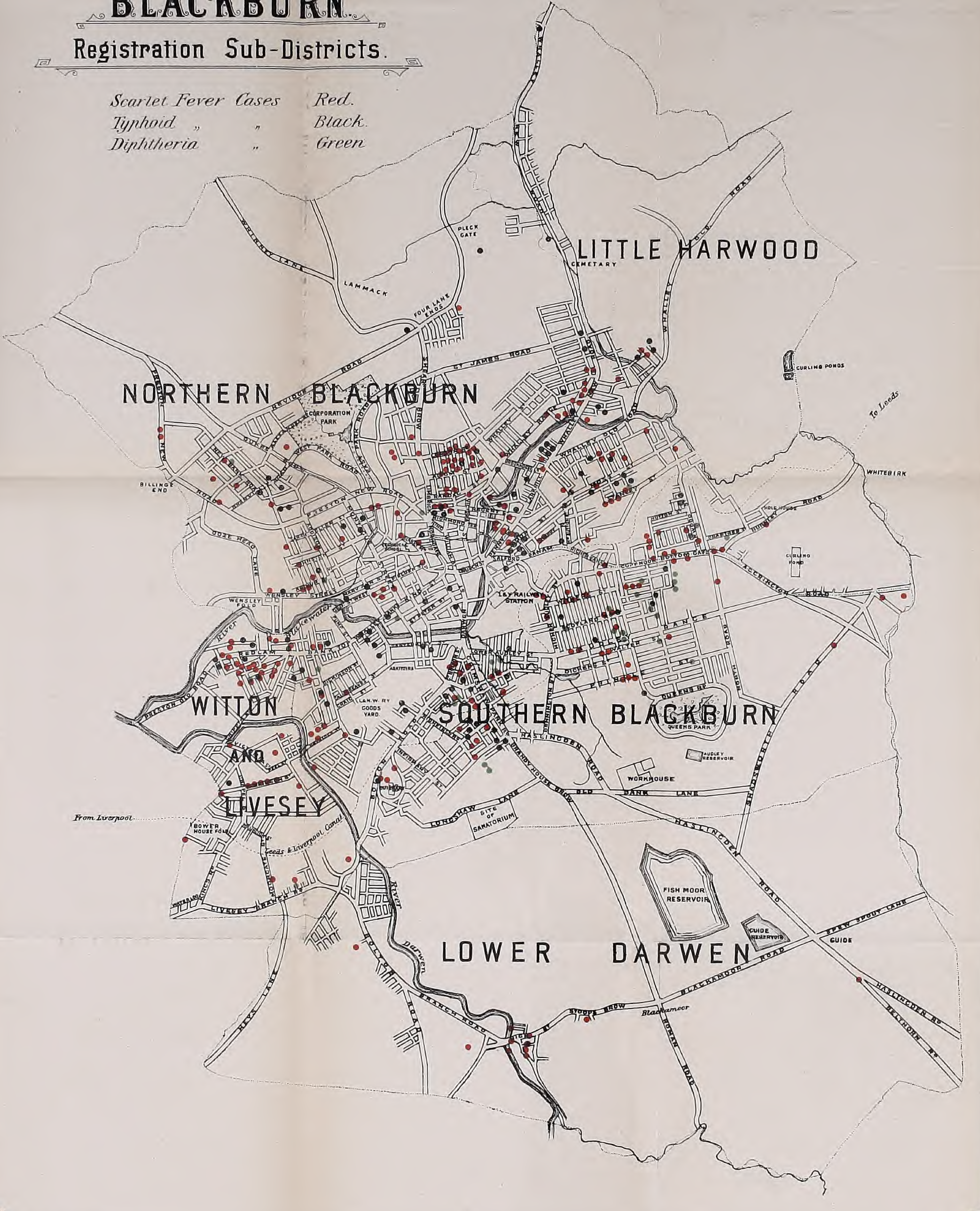
TYPHOID FEVER.

There were 119 notified cases and 28 deaths, compared with 129 cases and 32 deaths in 1894.

BLACKBURN

Registration Sub-Districts.

Scarlet Fever Cases	*Red.*
Typhoid " "	*Black.*
Diphtheria "	*Green*



Durham, Lithographer, Blackburn.

The incidence of the disease in the enumeration districts is shown in the accompanying table. Many of the districts which have previously escaped were attacked, and others which last year were much affected have escaped. In other words the disease is distinctly infectious, and its prevalence depends not only on insanitary conditions, but on the introduction of the specific poison.

TABLE XIX.

Notified Cases of Typhoid Fever for 1889-1895 in Enumeration Districts.

District.	1889	1890	1891	1892	1893	1894	1895	Total for 7 years	District.	1889	1890	1891	1892	1893	1894	1895	Total for 7 years.
1	0	0	0	1	1	0	1	3	41	2	3	1	1	1	1	1	10
2	0	1	1	0	1	0	0	3	42	2	0	3	0	6	2	1	14
3	0	0	0	1	1	0	4	6	43	4	3	2	2	8	2	4	25
4	0	1	2	1	1	0	2	7	44	0	0	0	0	0	0	0	0
5	0	0	1	0	0	0	1	2	45	0	0	0	1	0	1	1	3
6	1	0	1	0	0	1	2	5	46	0	0	0	0	1	0	2	3
7	2	2	3	0	1	1	1	10	47	0	0	0	0	2	1	1	4
8	1	3	2	0	3	0	0	9	48	0	1	1	0	2	3	0	7
9	0	0	0	0	2	0	0	2	49	0	0	0	1	1	0	3	5
10	2	2	1	0	1	0	1	7	50	2	1	0	0	1	1	0	5
11	1	1	0	3	0	1	4	10	51	1	1	2	1	1	0	2	8
12	1	0	1	2	1	1	0	6	52	0	0	0	0	0	0	0	0
13	0	0	0	2	2	0	4	8	53	0	1	4	1	1	0	2	9
14	0	1	1	1	3	1	1	8	54	2	1	0	1	1	1	0	6
15	1	4	1	1	4	0	3	14	55	0	4	0	0	0	1	1	6
16	1	0	1	0	5	1	1	9	56	3	0	4	0	5	0	3	15
17	1	3	0	0	2	0	0	6	57	1	2	0	0	3	4	0	10
18	4	6	1	1	1	0	1	14	58	0	4	0	1	2	0	3	10
19	0	4	0	0	0	1	2	7	59	1	7	0	1	1	1	0	11
20	3	4	0	1	1	0	0	9	60	5	1	1	2	0	1	3	13
21	4	6	1	1	0	0	0	12	61	0	0	0	0	0	3	1	4
22	1	1	0	0	1	1	1	5	62	0	0	1	4	3	0	0	8
23	2	1	1	0	0	2	0	6	63	1	1	1	0	1	0	0	4
24	4	4	1	2	2	1	1	15	64	0	1	1	1	0	0	0	3
25	2	1	1	1	1	1	1	8	65	0	0	3	2	1	1	1	8
26	1	1	0	1	0	0	1	4	66	2	1	7	1	2	2	2	17
27	1	0	2	1	2	4	0	10	67	0	1	2	1	2	3	0	9
28	4	0	0	1	1	2	1	9	68	0	3	3	1	1	1	1	10
29	0	0	0	0	1	0	0	1	69	0	3	0	0	0	0	0	3
30	2	1	2	2	1	3	1	12	70	2	1	1	2	3	1	0	10
31	2	3	0	1	3	1	1	11	71	3	0	1	2	2	3	2	13
32	1	1	0	1	2	0	0	5	72	1	1	2	0	1	0	1	6
33	0	0	0	1	3	4	0	8	73	1	1	2	1	2	1	0	8
34	1	1	1	1	0	1	1	6	74	1	0	2	1	0	1	1	6
35	1	0	0	0	0	2	0	3	75	0	0	0	0	0	1	1	2
36	0	0	1	0	0	0	3	4	76	0	0	2	1	0	0	0	3
37	1	0	2	0	8	11	1	23	77	0	0	0	2	0	0	1	3
38	0	0	0	0	1	3	3	7	78	0	1	0	0	1	0	0	2
39	0	0	2	0	1	3	0	6	79	1	0	1	0	0	0	1	3
40	0	1	2	0	2	4	1	10	80	3	0	0	3	2	0	3	11

TABLE XIX.—Continued

Notified Cases of Typhoid Fever for 1889-1895 in Enumeration Districts.

District	1889	1890	1891	1892	1893	1894	1895	Total for 7 years
81	0	0	0	0	0	0	2	2
82	0	1	1	2	5	2	2	13
83	1	2	1	1	2	0	0	7
84	0	0	0	0	0	1	1	2
85	1	1	1	1	0	0	1	5
86	1	0	0	0	0	1	2	4
87	0	2	0	0	0	0	3	5
88	0	0	1	0	0	0	0	1
89	0	2	1	0	1	0	1	5
90	1	1	2	0	2	1	0	7
91	2	0	1	1	0	0	1	5
92	0	2	1	1	3	1	2	10
93	1	2	1	1	0	4	0	9
94	1	1	0	0	0	1	0	3
95	1	1	2	1	0	1	3	9
96	0	0	0	1	0	0	0	1
97	0	0	0	2	3	0	3	8
98	2	0	0	0	1	1	1	5
99	1	0	0	0	0	0	0	1
100	1	1	1	0	1	0	0	4
101	1	0	1	0	1	2	1	6
102	1	0	0	1	0	0	2	4
103	2	2	3	0	0	0	4	11
104	1	5	1	3	3	1	1	15
105	1	1	2	0	2	0	1	7
106	1	0	0	0	0	0	0	1
107	4	2	1	0	3	2	0	12
108	0	0	1	1	2	2	1	7
109	1	0	2	2	5	6	0	16
110	0	0	1	0	9	5	0	15
111	1	1	0	3	1	3	0	9
112	4	1	2	1	1	1	1	11
113	1	0	1	3	0	3	1	9

On my recommendation the Health Committee passed the following resolution :—

That it be a recommendation to the Highway and General Drainage Committee to cause manholes to be provided on the sewers where not already existing, for the inspection and cleansing of the sewers after every case of Typhoid Fever, and to provide a proper system of flushing the sewers.

It is usually some days after the commencement of the disease before it comes to the knowledge of the Health Department. During this time the sewers are becoming contaminated with the discharges from the patients. Many of the sewers contain a deposit of ashes from trapped ashpits, and in these cases any infective material put into the sewer would be retained, and would be a danger to the neighbourhood. By thoroughly flushing and inspecting the sewers in order to see that they are cleansed, this danger is much removed.

Some of the cases one was unable to trace to any insanitary condition or to any previous case.

The drains of the houses where typhoid fever occurred have been tested with the following results :—

28 with no defects.
30 smoke escaped inside of house.
37 defects outside.
3 slop-pipe connected.

The following was the sanitary accommodation of the infected houses :—

42 had water closets
45 had tubs.
32 had ashpits.

The places of work and schools are also visited and inspected as regards sanitary condition.

No cases were traced to drinking water.

On September 12th two cases of typhoid fever were notified at a grocer's shop, one of the patients having been ill twelve days and the other five days. The patients were not considered to be in a fit condition to be removed to the hospital. On further enquiries it was found that three of the children had suffered from illnesses which, although not of a distinct type, were, judging from after events, probably mild cases of enteric fever. It was at once recognised that this shop might readily become a centre of infection for the district. The selling of milk was immediately stopped, and a day or two afterwards the shop closed and all substances unsealed or likely to have become contaminated were destroyed. Notwithstanding these precautions several cases arose in this district, and all the persons affected had had milk or groceries from this shop. In considering these cases it is well to remember that the district, although not by any means a healthy one, has been particularly free from typhoid fever for many years, and has since become free again. The following are the dates of notification or discovery of the cases, and also the dates of the commencement of illness :—

Situation.	Notification.	Commencement of illness.
(1) 15, Cleaver Street	Sept. 12th	Aug. 31st
(2) 15, Cleaver Street............	Sept. 12th	Sept. 7th
(3) 29, Cleaver Street	Sept. 20th	Sept. 2nd
(4) 29, Syke Street...............	Sept. 24th	Sept. 15th
(5) 1, Harrison's Yard	Sept. 25th	Sept. 15th
(6) 11, Chadwick Street ..	Oct 4th	Sept. 6th

It will be seen that these cases arose within a fortnight of one another. It is satisfactory to observe that no cases could have been infected after the illness at the shop had been made known at the Health Office and the precautions had been taken. From the dates it seems very probable that the infection, in all except Nos. 4 and 5, was due to the mild and apparently harmless sickness amongst the children which had preceded the marked cases of Typhoid Fever.

This small epidemic was of a very severe character; out of the six cases three died. Three were removed to the hospital, and one of these died and three were treated outside. Very active measures were taken, not only in removing filth nuisances of every description, but also in finding out whether any cases of typhoid fever had been overlooked. One of these, No. 5 in the list, was discovered in such a state of dirt and neglect as to be a serious source of danger to the neighbourhood.

Some cases could be traced with more or less certainty to infection from other districts, but owing to the varying incubation period there was often a considerable element of doubt. There was, however, a case infected at Great Harwood which could be traced with certainty. This person during the epidemic in Harwood had been there several times on business. On inquiring it was found that although he had not been accustomed to drinking milk whilst there, yet he had had milk in his tea. The milk had been supplied from the farm in connection with which the epidemic at Great Harwood had arisen. This undoubtedly was the origin of the case, and it accentuates the fact that it is not simply those who drink milk in the ordinary sense who are liable to infection from milk, but also those who take it in small quantities and mixed with other articles of food.

There was some probability that six other cases were introduced.

In one house there were four cases.
In one house there were three cases.
In three houses there were two cases.

From inquiries I made these seemed to be cases of direct infection.

DIPHTHERIA.

Thirty-one cases of diphtheria were notified, compared with thirty-nine last year, and of these cases 13 were removed to the hospital. This disease is one which is most difficult to diagnose without bacteriological examination.

	Jan.	Feb.	Mar.	Ap.	May.	Ju.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
Cases...	5	6	3	2	4	2	2	2	1	1	3	...

Except for a few cases early in the year which finished the small outbreak in the Audley District there was nothing approaching an epidemic. The cases were usually isolated, and many of them were of a very doubtful nature. Several of those that I had an opportunity of examining bacteriologically I found not to be diphtheria. Although I am of opinion that these numbers over represent the diphtheria in the town, yet it seems likely that the disease is gaining ground somewhat.

SMALLPOX.—Vaccination.

Year.	Successfully Vaccinated.	Died Unvaccinated.	Insusceptible.	Postponed.	Unaccounted for.
1889	3400	455	7	64	184
1890	3220	404	6	91	187
1891	2852	522	7	131	412
1892	2869	492	13	50	297
1893	2674	560	23	94	471
1894	2589	540	21	96	575
1895	2612	543	20	115	609

Fortunately no cases of smallpox have occurred during the year. There have been a few cases in neighbouring towns, and it is a matter of good luck that no case has been introduced into Blackburn. If cases are introduced we shall have to depend as in past years upon early isolation and vaccination. I must take this opportunity of pointing out that the number of children unvaccinated is increasing year by year. In 1889 the proportion of children unaccounted for or postponed was to the total successfully vaccinated as 1 to 13·6, last year it rose to 1 to 3·6. But the danger does not simply depend upon the number of unvaccinated children, but also upon the number of adults who are not protected by re-vaccination. There is no doubt that the protective power of vaccination in infancy is to a considerable extent lost in after life. It is very important that every person should be re-vaccinated between the ages of 15 and 20. If this were carried out universally we should have no more smallpox epidemics, and single cases would be scarce.

DIARRHŒA.

There were 280 deaths from diarrhœa compared with 88 in 1894 and 287 in 1893. 1895 and 1893 were years of excessive mortality from diarrhœa. The two epidemics in some respects were very similar, and in others presented marked contrasts. Chart 3 shows the weekly deaths in both years. Both epidemics lasted for ten to twelve weeks, but whereas the one in 1893 reached its maximum towards the end of June, the 1895 epidemic did not reach its maximum until the second week in October. Whether this difference in time can have had any influence in the difference of the distribution of the cases it is somewhat difficult to say.

In 1893 the cases were much more grouped together, and especially so in the Audley District. This was so to a greater extent than in any previous year, and I suggested at the time that this might be due to the early period at which the epidemic had shown itself and the prevalence of southerly breezes.

The incidence of diarrhœa in Blackburn last year is of considerable interest when we compare it in point of time with that of other towns. The epidemic here was several weeks later than in any other of the large towns that suffered severely. Chart 2 shows this as regards Preston and the 33 large towns. It was not until eleven weeks after the 33 large towns had reached their maximum that the epidemic in Blackburn had reached its height. These facts would be much more instructive if they were accompanied by accurate meteorological observations. Diarrhœa is supposed to be definitely related to the temperature of the soil at a certain depth. In towns much affected by this disease, it is supposed to break out as soon as the temperature of the soil, at a depth of four feet, reaches 56 deg. Fahrenheit.

If this is so the reason why the epidemic was so late here is that the soil temperature did not rise to the requisite level until

CHART 2.

DIARRHŒA MORTALITY PER 10,000 FROM JUNE TO NOVEMBER, 1895.

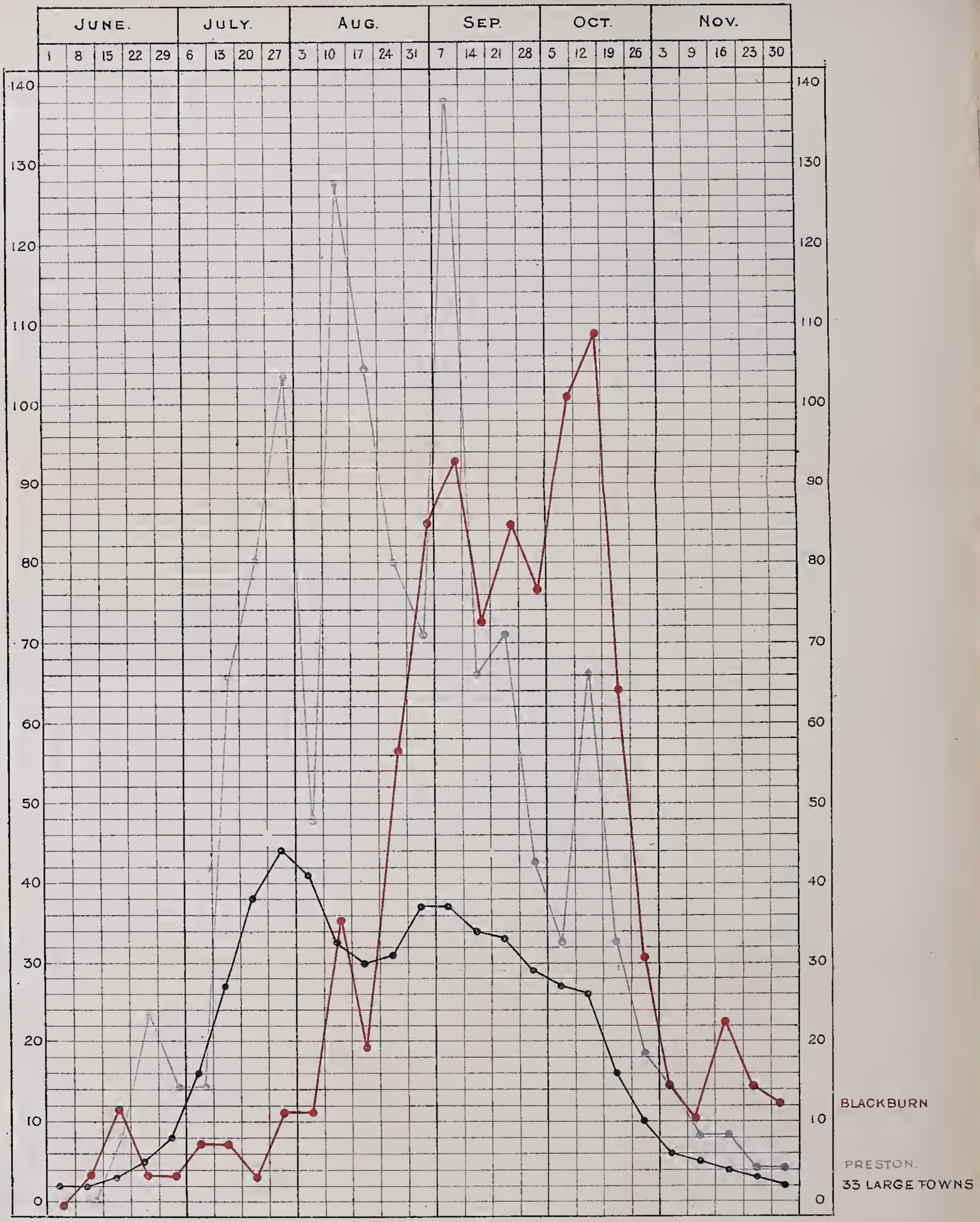
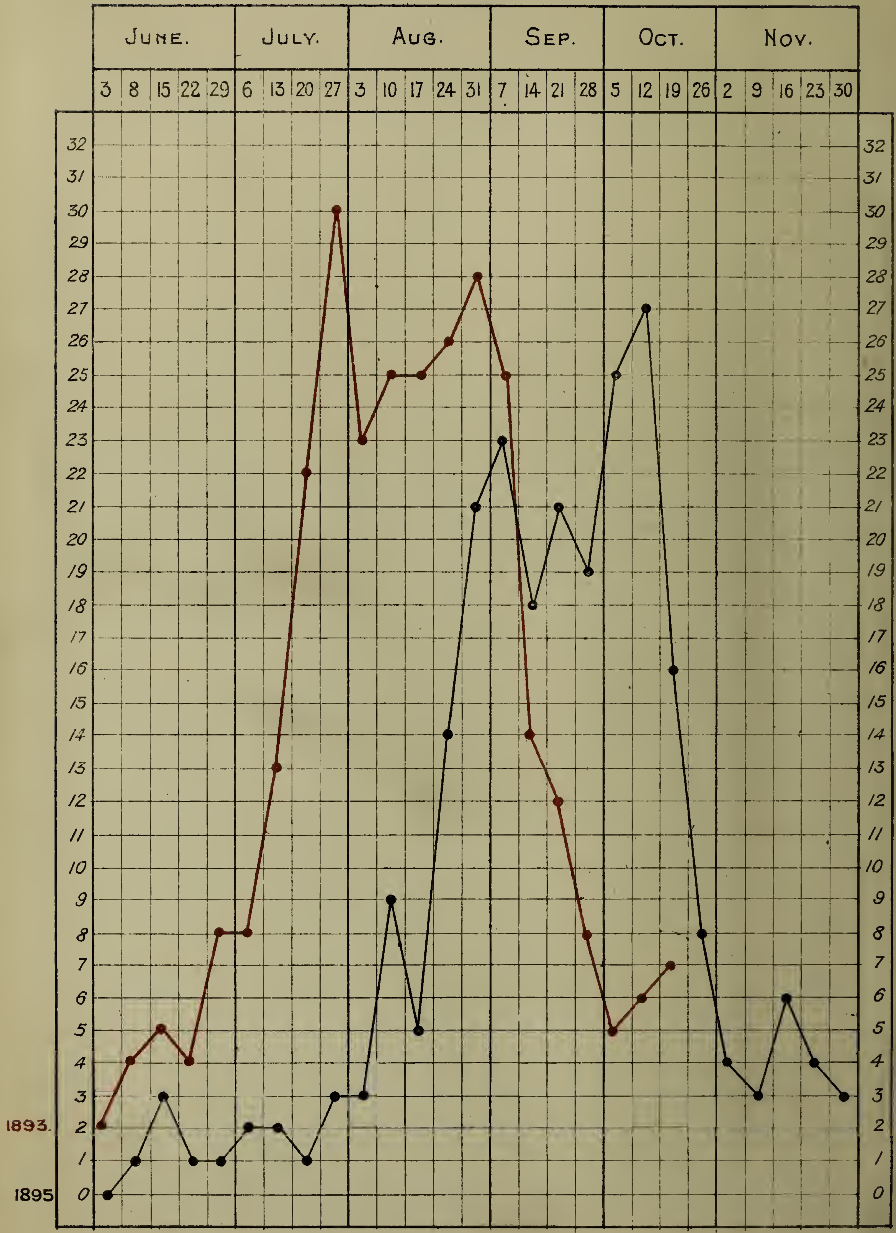


CHART 3.

DEATHS FROM DIARRHŒA DURING 1893 AND 1895.

IN WEEKS.



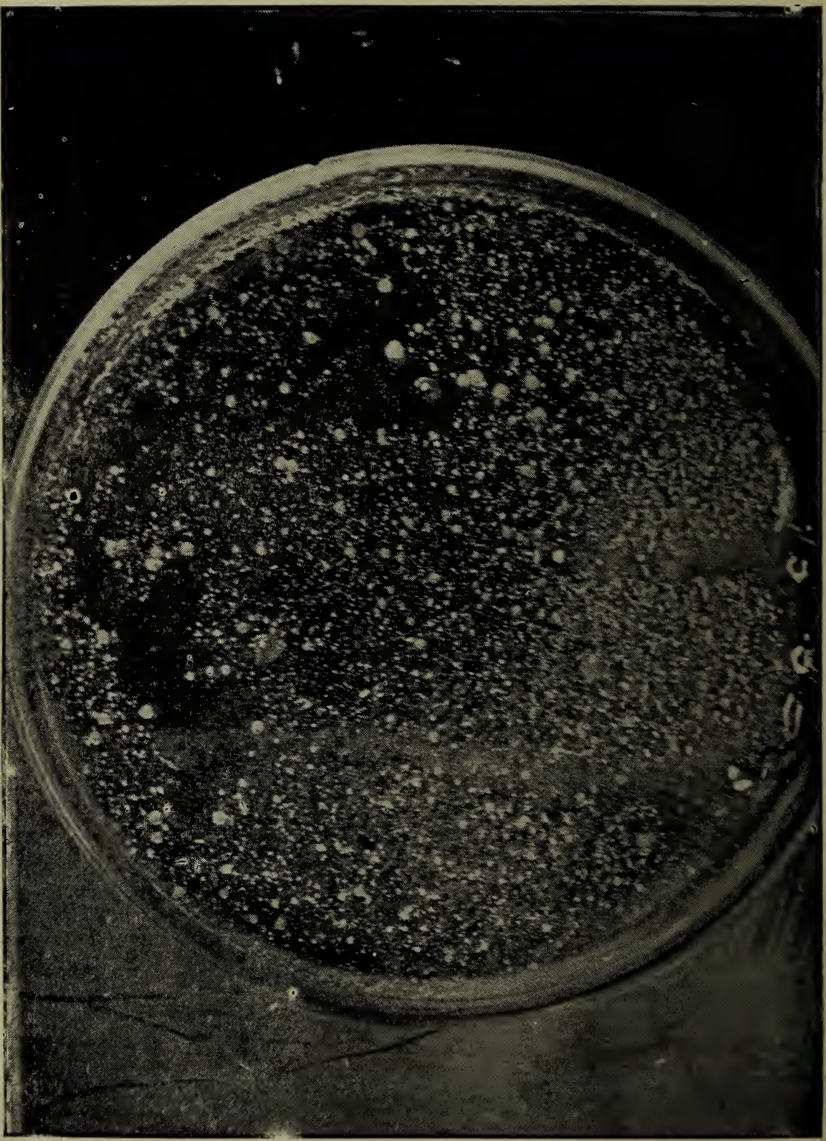
many weeks later than in other towns. This is somewhat difficult to believe, particularly as I find that in past years thit lateness of the epidemic in Blackburn has not shown itself, bus without observations of our own no further conclusions can be drawn.

Having very few cases for many weeks whilst other towns were suffering, one naturally thought that we should escape lightly, but this was not to be, and if the epidemic began late it also continued late. It is possible that if meteorological observations had been taken from day to day we should have formed some idea of the probable course and severity of the epidemic. I therefore think for this reason, and for others, that it is advisable that a meteorological station should be provided, and that accurate observations should be taken daily.

The poison of diarrhœa is supposed to be generated in the soil, and especially in a soil polluted with organic matter. This may safely be accepted as accurate. The importance then, of leaking middens, defective drains, unpaved yards, etc., is very obvious, for by them the soil becomes impregnated with organic matter, and the growth of the poison favoured. Then comes the question—How does the poison enter the system? Without much hesitation it is safe to say through the food, for the difference in mortality of bottle fed and breast fed children is enormous, and it is only in the former that the food is liable to pollution. How does the food become polluted? The mortality from diarrhœa is almost altogether amongst children of one year of age, and the food of children of this age is of course, almost entirely milk. Milk may be polluted during the process of milking, during storage in the dairy, during transit, during storage in the house, from some substance added to it, or whilst in the feeding bottle. It is very unlikely that the contamination often takes place whilst at the farm otherwise we should hear of more cases of summer diarhœa in the country, whereas the disease is comparatively uncommon outside large towns. The pollution of the milk then, takes place inside the house, and is due to accidental contamination, or to something added. Once the milk is polluted there could be no better means devised for preserving the impurity than the old fashioned bottle and tubing. Accidental contamination may be due to deposit from the atmosphere or want of cleanliness in handling vessels, etc. This is the general accepted notion of the way in which the diarrhœa poison gains access to the body. There is however another possible means of access, viz. :—by means of water which is always added to milk for infants. The two other diseases which are more or less allied to diarrhœa, viz. :—Cholera and Typhoid Fever, are frequently spread by means of water. There can be little doubt that if water were polluted by the specific organism of diarrhœa it would spread the disease. Then we have to consider whether there are any opportunities for the water to become so polluted, and if so, where is this likely to take place. It is well known that leaking water pipes if running full and without any obstruction to the flow, will suck in material from the surrounding soil. The soil in towns where diarrhœa is common is probably impregnated with the poison. If the water of this town is ever the carrier of the disease it is much more likely that it is polluted in this manner than that at any point outside.

But we must consider the ways in which diarrhœa epidemics differ from the usual water borne epidemics. They occur with absolute regularity, and do not appear to be in anyway accidental. No summer ever passes away without an epidemic, and the severity of it depends almost entirely upon the temperature reached. The deaths are not distributed all over the town, as we would expect if water were the carrier. The healthy parts of the town, containing those who look well after their children, almost entirely escape.

Whilst, therefore, it is probable that diarrhœa is not usually water borne, it does not follow that water may not in some instances carry the poison. In fact it seems very probable that



CULTIVATION FROM THE TUBE OF A FEEDING BOTTLE.

This plate is a photograph of a growth of organisms on gelatine. Each speck represents a colony of organisms, and each colony has grown from a single organism. The specks represent the number of organisms in $\frac{1}{20}$ of an inch of tubing from a feeding bottle after it had been cleansed with a brush. Some of the smaller colonies cannot be seen owing to the defect in the method of printing.

water polluted in the manner mentioned above could, during a time when diarrhœa is prevalent, spread the disease.

During the epidemic of diarrhœa there were many complaints of the colour of the water, and this, I am informed, was due to some extent to storm water having been allowed to enter the storage reservoir.

On account of the extreme probability that the stools of a diarrhœa patient are infective, the middens and tubs into which they have been put are emptied at once, and the contents burnt. The houses were deaths have occurred are visited, and the drains are flushed.

I had hoped that the circulation of directions for feeding of infants, by the registrars and in other ways, might have a beneficial effect. It seems, however, almost impossible to get mothers to discontrnue the use of the old feeding bottle with long tube, apparently because it is less trouble, It ought to be an acknowledged fact that a child fed in this manner has been criminally neglected.

In order to form some idea of the state of one of these tubes after it had been brushed and cleaned in the ordinary way, I took half an inch and examined the slimy coating on the inner side bacteriologically. I estimated roughly that in this half inch of tubing there were 1¼ millions of micro-organisms. The coating of the tube had a distinctly disagreeable odour, and the growths on the gelatine a most foul smell.

Of the diarrhœa deaths under one that were visited 79 per cent. were fed entirely by the bottle and only 10 per cent. entirely by the breast. A considerable number of children had been fed on condensed milk. The insanitary conditions found in the houses were numerous and many of them were of a kind that are due to careless and dirty tenants.

The improvements in scavenging, disposal of refuse, drainage, cleansing of the river, ete., which I think bear directly upon this disease, I mention in other parts of the Report.

ACUTE LUNG DISEASES.

There were 583 deaths from acute lung diseases, compared with 484 in 1894. The death-rate from these diseases still remains comparatively low.

TUBERCULOSIS.

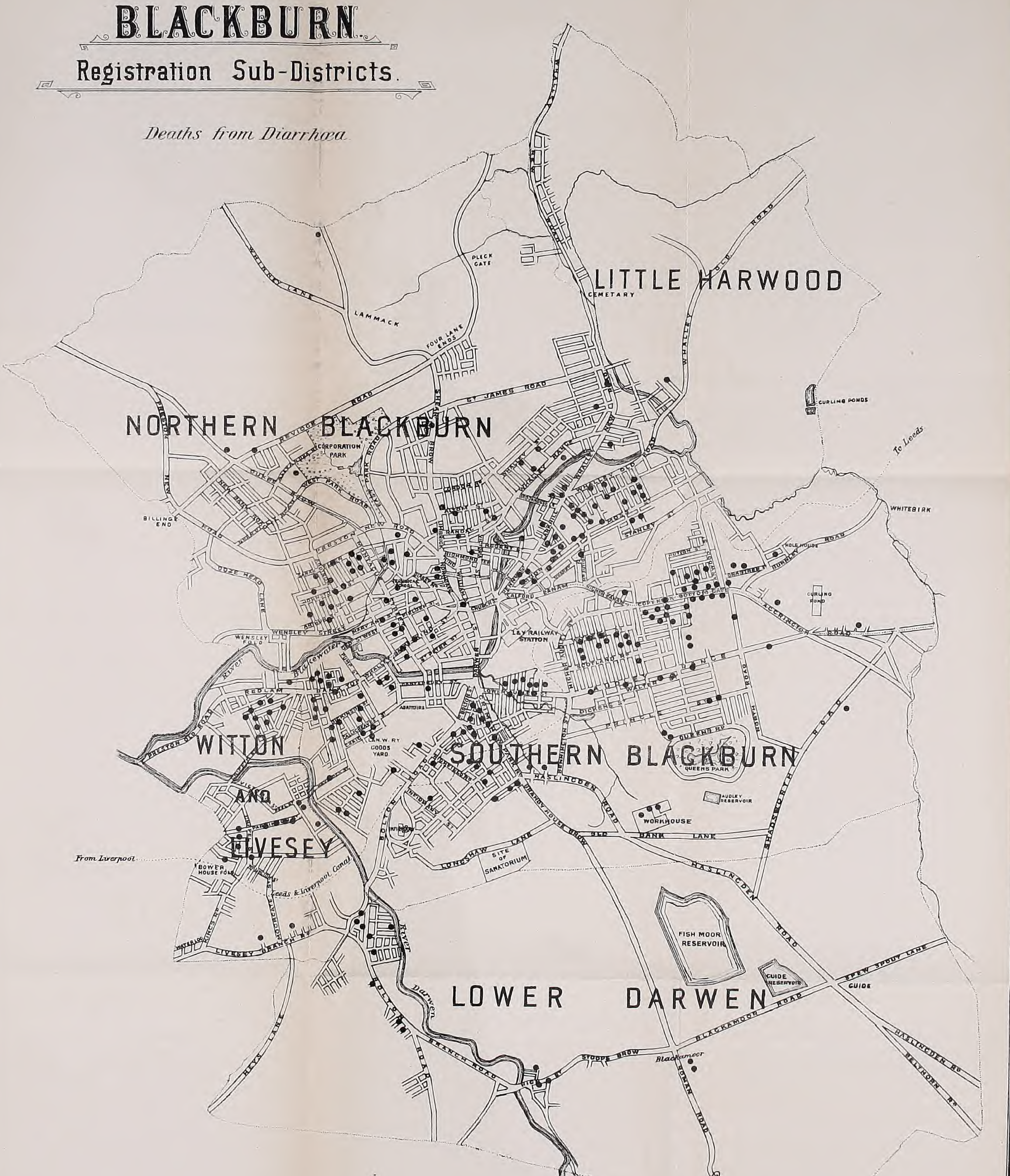
There were 296 deaths from Tuberculosis compared with 243 in 1894. This increase has been fairly evenly distributed through the various forms of Tuberculosis.

Precautions to be taken against spreading the infection of phthisis have been distributed through some of the insurance agencies, and houses where deaths occur have been disinfected. These are the only precautions that are taken for combating directly the infection except those relating to food inspection. I am afraid that little more can be done in this particular way until phthisis is made notifiable. At present we have no knowledge of the cases during life and consequently we cannot see that proper precautions are taken. It is impossible to study the circumstances in which they commence or the origin of the infection.

BLACKBURN.

Registration Sub-Districts.

Deaths from Diarrhœa.



Durham, Lithographer, Blackburn.

TABLE XX.

Deaths from Tuberculosis for six years.

	1895.		1894.		1893.		1892.		1891.		1890.	
	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate
General Tuberculosis............	44	0·34	30	0·23	35	0·28	26	0·21	18	0·15	12	0·10
Tabes Mesenterica...	55	0·43	40	0·31	80	0·64	61	0·49	54	0·44	51	0·42
Acute Hydrocephalus and Tubercular Meningitis	25	0·19	25	0·19	25	0·20	32	0·26	24	0·2	21	0·17
Phthisis	160	1·25	148	1·17	134	1·0	132	1.0	163	1·35	214	1·8
Other Forms	12	0·09	...	...	2	0·001	...	...	...	...	4	0·003
Total...........	296	2·3	243	1·92	276	2·2	251	2·0	259	2 14	302	2·5

INFLUENCE OF COTTON INDUSTRY ON HEALTH.

A Committee has been appointed to investigate this subject, with special reference to steaming in weaving sheds. I shall simply continue the tables published in previous reports with the addition of one giving the deaths and death rates of male and female weavers separately. This is an important table on account of the great difference in the death rates of males and females between the ages of 15 and 25. I can find no satisfactory explanation of this marked difference. The female death-rate between 15 and 25 in the whole borough is less than that of the males, but the difference is not great. There is a little greater laxity in the description of the trades of females. There is also this fact to be considered, that a married female operative who becomes ill and leaves off work for ten or twelve months, ceases to have any definite occupation and is entered as a housewife at death. A man under similar circumstances would still be entered as a weaver, unless he had taken to some other occupation.

Improvements may undoubtedly be made by:

(1) Provision of cloak rooms.

(2) Increasing the amount of fresh air supplied.

(3) Use of clean water for steaming purposes.

(4) Complete disconnection of closets from shed.

(5) Cooling of air of sheds in summer by evaporation instead of steaming.

DEATHS DURING, 1895.

Age Periods	Weavers	Spinners	Winders, Warpers &c.	Card Room Hands	Other Cotton	Borough
15 to 25	51	9	12	2	2	117
25 to 35	39	7	13	3	1	148
35 to 45	34	7	9	6	9	206
45 to 55	19	9	14	2	7	252
55 to 65	29	4	10	5	3	296
65 upds.	23	10	7	6	4	424

DEATH RATE for 1895.

Age Periods	Weavers	Spinners	Winders, Warpers, &c.	Card Room Hands	Other Cotton	Borough
15 to 25	5·0	11·7	5·3	3·8	3·7	4·7
25 to 35	7·1	8·6	8·4	5·1	1·5	6·9
35 to 45	12·9	14·0	10·4	16·3	18·0	13·4
45 to 55	15·1	41·6	36·1	10·8	23·5	23·4
55 to 65	66·5	27.5	70·9	86·2	24·3	45·9
65 ups.	184·0	217·3	152·1	461·5	133·3	109·2

DEATHS DURING 1889, 1890, 1891, 1892, 1893, 1894, 1895.

Age Periods	Weavers	Spinners	Winders and Warpers, etc.	Card room hands	Other Cotton	Borough
15 to 25	313	42	82	18	22	881
25 to 35	205	44	87	29	23	1054
35 to 45	199	51	70	34	40	1492
45 to 55	139	50	62	31	39	1727
55 to 65	191	60	46	19	60	2097
65 & upwards	164	80	70	21	55	2796

DEATH RATE 1889 to 1895.

Age Periods	Weavers	Spinners	Winders and Warpers, etc.	Card room hands	Other Cotton	Borough
15 to 25	4·3	7·8	5·1	4·9	5·8	5·2
25 to 35	5·3	7·4	8·1	7·1	5·1	7·4
35 to 45	10·8	14·6	11·5	13·1	11·4	14·4
45 to 55	14·7	33·0	22·8	24·0	18·7	24·0
55 to 65	59·3	59·1	46·6	46·7	69·6	48·6
65 & upwards	187·4	248·4	217·3	230·7	261·9	110·2

Deaths and Death Rates of Male and Female Weavers.

DEATHS.

Age Periods.	1889		1891		1892		1893		1894		1895		TOTAL.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25	22	19	20	14	22	22	20	25	22	25	23	28	129	133
25 to 35	6	13	18	11	12	36	9	16	10	25	12	27	67	128
35 to 45	10	5	15	9	11	27	22	23	5	11	16	18	79	93
45 to 55	10	4	20	5	9	8	9	4	9	5	12	7	69	33
55 to 65	23	5	24	2	19	3	19	7	10	3	22	7	117	27
65 & up.	20	3	24	3	20	6	14	4	21	2	20	3	119	21

DEATH RATES.

Age Periods.	1889		1891		1892		1893		1894		1895		TOTAL.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25	6·3	2·8	5·7	2·0	6·3	3·2	5·7	3·7	6 3	3·7	6·6	4·1	6·1	3·3
25 to 35	3·5	3·4	10·8	2·8	7·1	9·4	5.3	4·2	5·9	6·5	7·1	7·1	6·6	5·6
35 to 45	10·1	3 0	15·2	5·4	11·1	16·4	22·3	14·0	5·0	6·6	16·2	10·9	13·3	9·4
45 to 55	16·2	6·2	32·4	7·8	14·5	12·4	14·5	6·2	14·5	7·8	19·4	11·0	18·6	8·6
55 to 65	84·5	30·4	88·2	12·1	69·8	18·2	69 8	42·6	36·7	18·2	80·8	42·6	71·6	27·4
65 & up.	198·0	125·0	237 6	125 0	198·0	250·0	138·6	166 6	207 9	83·3	189·0	125·0	196·3	145·8

PHTHISIS, 1889—1895.

DEATHS.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton	Borough.
15 to 25	82	13	26	6	4	230
25 „ 35	71	16	34	8	7	200
35 „ 45	37	11	12	8	10	234
45 „ 55	13	4	3	6	4	137
55 „ 65	12	0	2		1	62
65 upwds.	0	1	2		1	13
Total	215	45	79	28	27	876

DEATH RATES.

Age Periods.	Weavers.	Spinners.	Winders. Warders. etc.	Card Room Hands.	Other Cotton	Borough.
15 to 25	1·1	2·4	1·4	1.6	1.0	1·3
25 „ 35	1·8	2·8	3·1	1·9	1.5	1·4
35 „ 45	2·0	3·1	1·9	3.1	2·8	2.2
45 „ 55	1·4	2·6	1·1	4·6	1.9	1·9
55 „ 65	3·9	0·0	2·0	0·0	1.1	1·4
65 upwds.	0·0	3.1	6·2	0.0	4.7	0·5
All ages over 15.	1·5	2·5	2.1	2.3	1·8	1.5

Bronchitis and Pneumonia, 1889-1895.

DEATHS.

Age Periods.	Weavers	Spinners	Winders, Warpers, etc.	Card room hands	Other Cotton	Borough
15 to 25	38	6	11	1	6	171
25 to 35	36	15	7	4	6	226
35 to 45	49	13	19	6	12	412
45 to 55	53	21	24	13	15	592
55 to 65	64	32	15	5	21	785
65 & upwards	61	25	20	8	20	915
Total...	321	112	96	37	80	3101

DEATH RATES.

Age Periods	Weavers	Spinners	Winders, Warpers, etc.	Card room hands	Other Cotton	Borough
15 to 25	0·8	1·1	0·6	0·2	1·5	1·0
25 to 35	0·9	2·6	0·6	0·9	1·3	1·6
35 to 45	2·1	3·7	3·1	2·3	3·4	4·0
45 to 55	6·0	13·8	8·8	10·0	7·2	8·2
55 to 65	20·9	31·5	15·1	12·3	24·3	18·2
65 & upwards	69 7	77·6	62·1	87·9	95·2	36·0
	2·2	6·4	2·6	3·0	5·3	5·6

These tables have the same general bearing as those published in 1894

FEVER HOSPITAL.—The Hospital having been opened for the reception of patients in September, 1894, this is the first Report of a complete year's work. The following table gives particulars with regard to the cases admitted.

DISEASE.	Remaining in Hospital Dec. 31st, 1894.	1895.			Remaining in Hospital Dec. 31st, 1895.	Average number of days in Hospital of cases during 1895.	Cases removed stated as a percentage of total notified.
		Admitted.	Discharged.	Died.			
Scarlet Fever	8	126	119	4	11	50 2	56 per cent.
Typhoid Fever	...	54	36	10*	8	34·2	45 4 per cent
Diphtheria.....................	2	13	13	2		32·8	24 per cent.
Measles..........................	...	9	7	2		20·2	
TOTAL...........	10	202	175	18	19	43·4	

*Including 1 death from Septic Pneumonia and 1 from Pyæmia which were admitted as Typhoid Fever.

Four separate diseases have been isolated, and frequently three at the same time. The cases of measles were mostly sent up to the Hospital as Scarlet Fever, and it required considerable vigilance to prevent this disease from being introduced into the Scarlet Fever wards It is satisfactory that during the first year of opening the hospital, 50 per cent of the notifiable diseases in the town have been isolated there. There is still in many quarters, considerable objection to removal, but this is gradually disappearing where the benefits of the hospital are becoming better known. It is somewhat remarkable that there was no death amongst the first hundred Scarlet Fever patients admitted. Of the complications amongst the Scarlet Fever patients the most important was discharge from the ear. It is well to note however, that although 15 patients suffered in this way none were sent away until the discharge had ceased at least 10 days. As this apparently simple complication often leads to permanent deafness and not uncommonly is the starting point of some fatal illness, it is worthy of great attention. No serious cases of albuminuria occurred and in no case did this persist up to time of discharge. Several cases of inflamation of the bed of the nail occurred in the Scarlet Fever patients, resulting in the separation of the nail.

There have been two return cases that is, cases occurring in a house within ten days of the discharge of a patient. In both the precautions taken in discharging, the bathing of the patient in disinfectant and the disinfection of the clothes, were enquired into very carefully and everything seemed to have been done satisfactorily. There is always the risk that articles of clothing that the child has had before being removed, have been put away unpurified and brought out again on the return of the patient. Nothing of the kind could be discovered in these cases. It is generally held that return cases are due to some condition of the nose or throat which render the discharge from them infectious.

In order to give great security, those cases are kept in longer whose throat or nose present any inflamatory mischief, and all mouths, throats, and noses, are thoroughly syringed with disinfectant for several days before discharge. The first of the two cases was a severe one, the throat symtoms being particularly marked, and the boy had evidently suffered previously from enlarged tonsils. He was kept in for eleven weeks, and treatment applied to the throat the whole of the time. The sister commenced to be ill seven days after his discharge.

The second case was kept in between 8 and 9 weeks. The only complication was some conjunctivitis; this had almost subsided on his discharge. Exactly seven days after the two sisters commenced to be ill.

Three patients were admitted from outside districts suffering from Typhoid Fever; two of them at the request of the Blackburn Rural Sanitary Authority, and one from Oswaldtwistle.

The importance of isolation is shewn by the fact that many cases of scarlet fever were removed from houses where trades were carried on.

The following is a list:

Sweet Shops, 4; Millinery, 2; Hardware dealer, 2; Draper, 2; Confectioner, 2; Flock Bed Dresser, 1; Hair Dresser, 1; Stationer, 1; Tobacconist, 1; Clogger, 1; Licensed Victualler, 1;

Some other shops that refused removal and could not provide isolation had to be closed.

FINNINGTON HOSPITAL.

In December, 1893, I reported to you that in my opinion Finnington Hospital was no longer fit for the reception of patients, and that considerable alterations would be necessary before it could be put in a suitable condition. The building was somewhat hurriedly altered for the reception of patients in the year 1888, during a small pox epidemic. Since then there have only been slight alterations not affecting in any way the structure of the building. The worst feature of the building was the defective roof which was so bad that no amount of repairing seemed to have any permanent effect. There were, however, other grave defects. For example none of the wards had true cross ventilation and one of the large wards was lighted and ventilated from the top only. In fact this ward I considered utterly unfit for patients The accommodation for nurses was extremely poor and quite unsuitable. Considerable delay was caused by the Hospital being occupied with patients during part of 1894. The suggested alterations are now being carried out, plans and estimates having been submitted to you by the Borough Engineer. The total cost of the alterations will be about £1,050.

The principal alteration consists of re-roofing the building and ceiling the wards. The wards will be widened by 13ft., and a brick wall with windows built where formerly was a blank wooden partition. The centre inside wall, which was formerly made of wood, will be built of brick. A new bath room, lavatory, and 3 water closets, properly disconnected from the wards, will be added, and a small mortuary built. A proper out-bathing place and discharging room will be built, so that it will be no longer necessary to discharge patients driectly from the ward, and the dis-infectory re-arranged. A cottage will be walled off and included in the grounds as a nurses home.

In making these alterations much of the old brick has been used, and it has been possible by taking down some of the walls to a height of 8 feet, to leave an airing ground for the patients, in which they will be able get fresh air, and still have no possible communication with outside. The effect of the alterations besides making the wards fit for the reception of patients, and giving fair accommodation for the nurses, is considerably to increase the ward space. The floor space will be increased by 1,100 square feet, and the air space by 13,000 cubic feet.

LODGING HOUSES.

Only one fresh house has been registered during the year. A much higher standard is required now of a house before it is registered. The supervision too is more strict, but notwithstanding this, the condition of the houses leaves much to be desired. The keepers or deputies are drawn from a class of men who are altogether unsuitable for the work. In my monthly Report for February, I pointed out the advantages to be gained by having a well conducted Municipal Lodging House. The committee resolved :—"That it be referred to the Chairman and Vice-Chairman and the Medical Officer of Health to visit one or two such lodging houses in other towns, and to report on the matter." The Report has not yet been presented. One of the greatest advantages of a good lodging house is that it stimulates the spirit of emulation. The influence upon the other houses is probably the most important effect that a good lodging house would have.

HOUSES LET IN LODGINGS.

The Bye-Laws with respect to houses let in lodgings were passed in June, 1895. They are now being enforced. It requires a certain amount of discrimination to always distinguish those houses which are meant to be governed by these bye-laws. There is no doubt that it is in this class of house that most of the extreme cases of overcrowding occur. The following card has been drawn up and placed in the rooms so that the tenants shall understand the number of persons allowed and the responsibilities that fall upon them.

HOUSE LET IN LODGINGS.

Situate ______________________________

Room No. ____________________________

The number of adults allowed in this room is—

_____________________ if used for sleeping only ;

_____________________ if used for living and sleeping ;

and this number must not be exceeded.

Two Children under ten years of age count as one adult.

The Yard and Water Closet or Privy must be kept in a clean and wholesome condition.

The floor of the room must be swept daily, and thoroughly washed at least once in each week ; and the windows and fittings kept clean.

The Staircase, Landing, and Passage, must be kept in a clean condition.

All Filth and Refuse must be removed from the room at least once daily, and the vessels cleansed.

Every window must be kept open for one hour during the forenoon. and one hour during the afternoon except during rough weather, or it is undesirable on account of sickness.

Any case of Infectious Disease that may occur must be notified at once to the Medical Officer of Health.

Free access for the purpose of inspection must be allowed at all times to the Sanitary Inspectors.

A Copy of the Bye-laws relating to Houses let in Lodgings may be obtained on application at the Health Office.

JAMES WHEATLEY, M.D.,
Medical Officer of Health,

Health Office,
51 Ainsworth Street,
Blackburn

REFUSE DESTROYED AT DESTRUCTOR, 1895.

Month	Midden Refuse			Ashpit Refuse			Fish, Carcases, Market Refuse, &c.			Total		
	Tons	Cwts.	Qrs.	Tons	Cwts.	Qrs.	Tons	Cwts.	Qrs.	Tons	Cwts.	Qrs.
January	771	11	0	110	13	0	68	12	0	950	16	0
February	893	7	0	111	6	0	88	8	0	1093	1	0
March	901	9	0	115	8	0	77	17	2	1094	14	2
April	710	13	0	102	12	0	102	15	2	916	0	2
May	746	0	0	101	8	0	81	4	2	928	12	2
June...........	959	19	0	95	4	0	101	11	2	1156	14	2
July	780	3	0	145	3	0	82	0	0	1007	6	0
August.........	872	7	0	98	16	0	95	11	2	1066	14	2
September ...	801	11	0	67	8	0	100	9	3	969	8	3
October	809	1	0	108	19	0	95	9	0	1013	9	0
November ...	1054	13	0	147	16	0	124	5	2	1326	14	2
December ...	696	19	0	124	1	0	118	4	2	939	4	2
Total......	9997	13	0	1328	14	0	1136	9	1	12462	16	1

REFUSE TIPPED.

Midden Refuse—3,540 tons. Ashpit Refuse—30,795 tons.

Wet Ashpits Emptied......................	27,892
Dry „ „	29,378
Excreta Tubs Emptied	574.836
„ „ Cleansed	460,829
Ash Tubs Emptied	287,419

The amounts correspond fairly closely with those of 1894. The total burned at the destructor in 1894 was 12,565 tons compared with 12,462 in 1895; whereas in 1894, 34,072 tons were tipped and in 1895, 34,335 tons. The only improvement is that only 3,540 tons of midden refuse were tipped compared with 5,174 tons in 1894.

Although it is difficult or impossible to shew the effect of tipping upon the health of Blackburn by reference to statistics because so many other more important factors are at work, yet it is certain that decomposing organic refuse has a deteriorating effect upon the atmosphere and consequently upon the health of the people. The extremely untidy appearance of districts where tips are must have a bad effect upon the people who live close to, and the necessity for keeping clean their own premises cannot seem very necessary to them if the worst kind of refuse is allowed to be tipped indiscriminately within a few yards of their house.

It is to be hoped that some further provision will soon be made so that at least all the midden refuse will be burnt and the rest will be disposed of in a more satisfactory manner.

The emptying of middens has been done slightly more frequently than during the previous year, but cannot yet be considered satisfactory. A great many complaints have been made during the year of the neglect to empty the ash tubs regularly, and in comparing the figures with 1894 it will be seen notwithstanding the growth of the town there were 34,000 less tubs emptied during 1895 than 1894.

The point to which I wish to draw attention with regard to collection of excreta is that no less than 114,000 excreta tubs were replaced after the contents have been emptied without cleansing. This is a most disgusting practice and one which has caused much complaint. Recommendations have been made previously to the Scavenging Department with the result that some slight improvement has been made.

Cleansing the River Blakewater.

Very few pollutions have been discovered and removed during the year. The river is now almost free from household sewage of any description, with the exception of that which comes from the unsewered district of Pleckgate. This group of houses discharges its slop water directly into the Lammock stream, one of the tributaries of the River Blakewater. Some of the neighbouring farmhouses also drain into the river by more or less circuitous routes. It is not possible to drain this district without laying a sewer down towards Whalley New Road. As the polluted water has afterwards to travel through the whole town, it is most necessary that proper drainage should be provided.

But apart from household sewage, the surface water from the streets contains sufficient organic impurities to allow of most objectionable decomposition when it stagnates in the weirs. These weirs act as catch pits for the solid matter which is brought down in suspension, and no regular means have been adopted for removing the deposit. Until last June there was considerable difficulty in the way of raising the weirs, because in dry weather, during which the nuisance generally arises, the ordinary river flow is not sufficient to fill the weirs to the proper height for working purposes. At the June Committee the following resolutions were passed :—

"They also recommend that the water from Pickup Bank Reservoir should be used for cleansing the river, which could be done by laying a main from the water main at the Audley Destructor, along Bennington street to the Audley Brook, and that it be a recommendation to the Highway and Waterworks Committees accordingly."

At the June Meeting of the Waterworks Committee it was resolved (1)—That the recommendation be agreed to, and the water from the Pickup Bank Reservoir be supplied to the Highway, &c. Committee, for the purpose of cleansing the River Blakewater, free of charge, until such time as this Committee requires the water for other purposes, subject to the Highway, &c. Committee bearing the cost of laying the necessary main. (2) That the mill owners and others on the banks of the Blakewater below Darwen Street Bridge, be requested to pay a small acknowledgment in respect of the supply of such water.

The necessary connections have been made so that the Pickup Bank water can be allowed to run down the river. It is possible now to raise the weirs for cleansing purposes at any time and to fill them again with clean water. But not much is gained by this alone unless the deep deposit of sludge in many parts, as much as three feet, is removed periodically. In summer the temperature rises to a great height as the condensed water from the mills is turned into it. The organisms in the sludge develop rapidly and give off foul gases. The bubbles of gas also carry up to the surface small particles of solid matter and form a most disgusting looking scum. The worst of the weirs is the one at King Street Bridge, and its condition will never be satisfactory unless it is thoroughly cleansed at least once a year and afterwards flushed at intervals. The provision of a sludge pump, according to the recommendation of the Health Committee, would probably much facilitate the cleansing of this weir.

INSANITARY PROPERTY.

9, 9a, 11, 11a, 13, 13a, 15, 15a, 19, *and* 21, *Greaves Street*; 9 *and* 11, *Syke Street*; 154, 156, 158, *and* 160, *Moor Street*; 59, 61, 63, *and* 65, *Moor Street*; 69, 73, 83, 85, 87, *and* 89, *Cleaver Street*; 23, 37, 39, *Cleaver Street*; 2, 14, *and* 16, *Back Moor Street*; 35 *and* 37, *Larkhill Street*: 21 *and* 21a, *Addison Street*; 3 *and* 5a, *Henry Street*; 150 *and* 152, *Moor Street*; 1 *and* 3, *Harrison*'s *Yard*; were ordered to be made into through houses and otherwise altered or closed. The alterations were made.

116, 118, 120, 122, 124, 126, *Moor Street*, were ordered to be made into through houses and otherwise altered or closed.

The alterations were not made, and consequently the houses were closed.

18, 20, 22, 24, 34, 36, 38, 40, 48, 50, 52, *and* 54, *Fisher Street*; 93, *Moor Street*; 17 *and* 19, *Duke Street*; 4, *Haworth Court*; were ordered to be altered or closed. They were altered satisfactorily.

2, 3, 4, *and* 5, *Long Row*, were ordered to be altered or closed. The alterations are not yet completed.

1, 3, 5 *Hutchinson Street*; 6, 8, *and* 10 *Clayton Court*; no No. *Friday Street*; 12, *and* two houses unnumbered *Clayton Court*; 11 *Crook Street*; 5 *Shorrock Street*; house unnumbered *Harrison's Yard*. These houses were closed on account of deficient light and ventilation and general dilapidation.

12, 14, 16, 26, 28, 30, 32, 42, 44, 46, 56 *and* 58 *Fisher Street*; 42 *and* 44 *Friday Street*; were cellar dwellings. They were ordered to be closed as unfit for human habitation.

91 *and* 97 *Chapel Street*; 15 *and* 17 *Whalley Banks*; 14 *and* 16 *Cannon Street*; 2a *Back Greaves Street*; 7 *Back Moor Street*; were closed on account of absence of light and through ventilation.

14 *and* 16 *Queen Street*; 20, 22, 24 *Blakey Moor*; 16, 18, 20, 22, 24 *and* 26 *Crook Street*; 6, 8, 9, 10, 11, 36 *and* 48 *Jack Croft*; 26, 28, 30 *Lyon Street*; were closed on account of general dilapidation.

The following houses having been declared unfit for human habitation, and certified as predjudical to health, have been ordered to be taken down—

24, 26 *Cannon Street*;
33, 35, 37, 39 *Back Pearson Street*;
115, 117 *Chapel Street*;

7, 28, 29, 30, 33, 34, 35, 39 *and* 40 *Jack Croft* ;
14 *and* 16 *Cannon Street* ;
14 *and* 16 *Queen Street* ;
16, 18, 20, 22, 24 *and* 26 *Crook Street* ;
6, 8, 9, 10, 11, 36 *and* 48 *Jack Croft.*

WATER SUPPLY.

Considerable alarm was felt during the last summer months with respect to the water supply of the town. In many houses, especially in the lower lying parts of the town where the pressure is high, the water was of a distinctly brown colour. It was perhaps at its worst during the time of the Measles and Diarrhœa epidemics, and naturally the question was asked could the two be connected. Of course the epidemic of measles could in no way be associated with water supply. It is also equally evident that the diarrhœa could not be caused by the water unless it became polluted during transit in the pipes throughout the town. This is discussed under the heading of diarrhœa. But apart from these diseases, the water for a considerable period was certainly not inviting. A sample sent to the Analyst gave the following result :—

Amounts stated as parts per 100,000.

Total solid matter in solution	6·32	Nitrogen as Nitrates...	·021
Organic Carbon	·333	Total comb'ed Nitrogen	·051
Organic Nitrogen...............	·026	Combined Chlorine ...	1·2
Ammonia	·004	Total Hardness.........	1·82
Ammonia from organic matter	·009		

Contains diatoms and other harmless organisms; also vegetable matter, like peaty matter, but is otherwise harmless.

I made some quantitative bacteriological analysis, but did not find the number of organisms excessive. Much of the colour was no doubt caused by disturbance of the deposit on the pipes. This is shown by the fact that nearly all the complaints came from low lying parts of the town where the pressure is high.

The only means by which colourless water can be supplied to the town is by filtration. The quality, however, as well as the quantity of the water would be much improved if the reservoir at Whitewell, which has been under consideration for some time, were built. The deposit in the pipes of peaty matter is somewhat difficult to deal with, but this might be lessened by more frequent flushing.

ANALYSIS OF SAMPLES OF WATER taken from Wells in the Borough.

	Amount stated in parts per 100,000.			
	1	2	3	4
Total Solid Matter in Solution ...	23·16	47·88	50·4	36·6
Organic Carbon	·148	·108	·173	·067
Organic Nitrogen	·029	·017	·041	·029
Ammonia............................	·002	·000	·008	·002
Ammonia from Organic Matter...	·006	·005	·006	·002
Nitrogen as Nitrates	·371	·306	·459	·000
Combined Chlorine	2·2	2·95	3·2	1 6
Hardness: Temporary	·43	7·57	3·0	
Do. Permanent	9·57	17·72	23·58	
Do. Total....................	10·0	25·29	26·58	...
	Traces of vegetable matter only. This sample is fit for domestic use.	Traces of vegetable matter only. This sample is fit for domestic use.	Traces of vegetable matter only. This sample is not quite pure, but is wholesome.	Traces of vegetable matter only. This sample is slightly acid, and may act on lead, but is in no other respects a very pure water.

BUILDING BYE-LAWS.

I am sorry not to be able to report that new building bye-laws have been adopted. There are very many matters of great importance which should be regulated by them. There is one, however, viz., the provision of a damp proof course, which is of such great importance that of itself it would justify new bye-laws In previous reports I have pointed out many of the alterations which are needed, and amongst them is a thorough inspection of a new house before it is allowed to be inhabited, not simply in order to see if the house is satisfatorily built, but also that it has been allowed to dry. There is no doubt that many serious illnesses are caused by the occupation of houses almost immediately after completion. The system, too, of building half a row of houses, and leaving the house that will sometime be built on to insufficiently protected from the weather should certainly not be allowed. There is another point which I have not previously mentioned, but which is of great importance, and that is the relative height of buildings, and the width of the street which they face. In our building regulations there is no restriction to the height of buildings. High buildings in narrow streets are, however, extremely objectionable, as they prevent either a free circulation of air, or the access of sunlight to the lower rooms. All these matters assume great importance, when we consider that many diseases, but especially consumption, are associated with darkness and dampness of dwellings, and absence of fresh air.

OPEN SPACES.

The question of open spaces again came up before the Health Committee and the following were suggested and visited.

1. Between *Belper street*, *Moss street*, *Union Buildings*, and *Peter street.*

2. Between *Higher Eanam* and *Higher Barn street.*

3. Between *Chapel street*, *St. Peter street*, *Byrom street*, and *Freckleton street.*

4. Area occupied by Nos. 51, 53 and 55 *Pearson street*, and 33, 35, 37, 39, 41, 43, 45, 47 and 49 *Back Pearson street.*

5. An open space on the west side of *Pump street*, behind No's 1 to 21 *George street west.*

6. Between *Johnson street*, *Cowell street*, *Cutler street*, and *Messrs. Kays Waste Works.*

After obtaining full particulars of each it was found that there were great obstacles in the way of obtaining a suitable playground on any of the above-mentioned sites. There are however, other sites that may prove more suitable and it is to be hoped that no opportunity will be missed for obtaining some. The smallness of a space is not to my mind a good argument against it. In the middle of a town large spaces for cricket and football cannot be provided, but small places for children to play in instead of playing in the streets are what should be aimed at.

Cowsheds, Dairies, and Milk Supply.

180 visits have been made by the inspectors, 80 by myself, and your committee have upon my report visited 32 farms.

The defects found have been extremely numerous and varied. Some of the cowsheds are of such a bad construction, that nothing but re-building can be satisfactory, and others require very radical structural alterations.

Insanitary cowsheds are undoubtedly the cause of much tuberculosis amongst cows, and of the existing insanitary conditions overcrowding is perhaps the worst. Amongst human beings it has long been known that overcrowding in badly ventilated rooms is the most potent factor in causing tuberculosis. When comparing the overcrowding in cowsheds, with that of human beings in houses and workshops it must be remembered that cows for a considerable portion of the year, are cooped up in the same building day and night, and that the atmosphere is not only polluted by respiration, but also by urine and fœcus. In one of the samples of air taken from a cowshed, I found the carbonic acid amounted to 5 per 1,000. This is worse than any air that I have analysed from the most crowded schools or workshops.

Our attention is at present devoted to the condition of the cowshed and dairy and the water supply and drainage of the farm. No examination of the cattle is made, and no attempt to enforce isolation of diseased cattle has been tried. For this work a competent veterinary surgeon would be necessary. It is, however, work that should be done.

The question of a pure milk supply is one which is receiving considerable attention at the present time. The means by which Copenhagen is now supplied with pure milk are generally acknowledged to be excellent. The possibility of taking somewhat similar steps has been broached by Dr. Niven, Medical Officer of Health for Manchester. The powers for enforcing proper conditions are so limited, and sources from which milk comes are so often out of the control of the consumers, that other means must be considered if supplies of milk are to be rendered pure.

The milk of Copenhagen has been very much improved by the formation of a company whose chief object is to supply pure milk to the town. The farmers from whom the milk is brought have to conform to certain conditions of cleanliness, etc., and also have to isolate any cows which are considered to be unfit for milking. A number of veterinary surgeons are employed for purposes of inspection. After the milk has been bought, the company undertakes the filtration, sterilisation, bottling and distributing. Such an undertaking, of course, will not succeed unless the people are sufficiently intelligent to be willing to pay a trifle more for the pure milk.

I quote here an extract from Dr. Woodhead's evidence before the Royal Commission, on the Effect of Food derived from

Tuberculous Animals on Human Health :—"It follows from the observations here recorded that it is of supreme importance to the consumers of milk that the existence of any tuberculous disease of the udder should be ascertained without delay. Now there is no difficulty whatever about recognising the presence of some abnormal condition in a cow's udder, and the presence of such condition—whatever it be—demands the judgment of a responsible expert should forthwith be obtained about its nature unless, indeed, the owner prefers to slaughter the cow without delay. If the expert finds tubercle bacilli in the milk, the cow has dangerous tuberculosis of the udder. If he does not find them he may apply the further test of inoculating some susceptible animals with the milk, and thereby learn nature of the udder disease. By this test he will very rarely be misled. Obviously the cow must be in seclusion, and every particle of her milk must be treated as highly dangerous, during any delay that can be permitted for diagnostic purposes, and until the disease has been proved not to be tuberculosis."

Now that a sufficiently accurate test for tuberculosis in cattle is known, there is no longer any excuse for allowing tubercular beasts to remain in the same shed as healthy ones, and their milk to be used for human food. It is perfectly certain that the isolation of tubercular beasts would in the long run not only lessen the amount of tuberculosis in the human subject, but would be a distinct saving to the farmer.

Besides the danger of milk from unhealthy cows, there is the danger of contamination during collection and storage in dairy and milkshop. These are matters which depend partly upon the sanitary condition of the premises, but even more upon the personal habits of those engaged in the trade. The dairies and milkshops are now being inspected regularly and, although far from satisfactory, are improving. It is contemplated to send out a list of instructions to those engaged in the collection of milk, so as to lessen the contamination as far as possible.

Although I have to point out what is very satisfactory—that no case of Scarlet Fever or Typhoid Fever has been spread from a farm—I wish again to emphasise the fact that the Blackburn Rural Sanitary Authority have not adopted the Infectious Diseases Notification Act. It seems very unfair that a town should have to receive a considerable portion of its milk supply from districts that do not use reasonable precautions against contamination by infected material.

MEAT INSPECTION AND SLAUGHTER HOUSES.

In last year's report I entered somewhat fully into this subject with special reference to the report of the Royal Commission on Tuberculosis in cattle. The evidence given before the Commission and the report made by them are of the greatest importance. The whole matter, however, is one for action by the Government, and until tuberculosis is scheduled under the Contagious Diseases Act, and competant Veterinary Inspectors are appointed to examine the cattle at intervals during life, and always before slaughter, not much efficient action can be taken Now that it is definitely proved that one of the greatest dangers. of transmission of tuberculosis by meat is due to the contamination of the flesh with knives, etc, smeared with tubercular matter, it becomes of the greatest importance that beasts should be examined before slaughter, and all infected ones should be killed in a slaughterhouse set apart for the purpose, and by persons specially trained for the work.

I have frequently mentioned in my reports that the private slaughter-houses render meat inspection difficult and imperfect. It certainly might be a rule in private slaughter-houses that no beast be removed until the Inspector has seen it, and also that the organs of a beast that had been slaughtered should be kept for inspection. In order to find out as nearly as possible what proportion of beasts killed are inspected, the Meat Inspector has been instructed to keep a record of all beasts slaughtered in public and private slaughterhouses, and also a record of the number he has inspected. Up to the present time he has inspected 98 per cent. of those slaughtered in public slaughterhouses, and 89 per cent. of those slaughtered in private slaughterhouses.

I have reported to you the unsatisfactory condition of the public slaughterhouses, and the matter has been referred to the Sub-Committee to consider. The slaughterhouses were built so as to allow of a place for keeping the cattle before slaughter, and one for killing purposes, and no accommodation was made for hanging the the meat. These two places open one directly into the other. It is very important that a suitable place should be provided for hanging the meat, and this should not be the same place as the slaughterhouse, and should certainly have no communication with the lair. Several of the butchers have converted what originally was the slaughterhouse into a hanging room, and have used the lair for a slaughterhouse.This has two drawbacks—In the first place the lair is unsuitable for killing in its present condition, and secondly there is no place for storage of the cattle. The cattle are exposed to all sorts of weather; a proceeding which besides being cruel has a bad effect upon the flesh of the animal when killed. In well built abbattoirs there is always seperate provision made for lairage, slaughtering, and hanging. The lairs should always be separated by an open passage from the slaughterhouse, and it is well to have open air disconnection between the slaughterhouse and hanging room. One half the slaughterhouses can be altered so as to conform fairly well with these conditions without interfering to any very great extent with the present structure.

FACTORIES AND WORKSHOPS.

The law relating to Factories and Workshops has been to some extent altered during the last twelve months by the passing of the Factory and Workshops Act, 1895. The following are the sections of this Act which deal with sanitary matters :—

Over-crowding of factory or workshop.

Sanitary Provisions and Safety.

1.—(1). A factory shall for the purpose of section three of the principal Act, and a workshop shall for the purpose of the law relating to public health, be deemed to be so overcrowded as to be dangerous or injurious to the health of the persons employed therein, if the number of cubic feet of space in any room therein bears to the number of persons employed at once in the room a proportion less than two hundred and fifty, or, during any period of overtime, four hundred, cubic feet of space to every person.

(2). Provided that the Secretary of State may, by order made in accordance with section sixty-five of the principal Act, modify this proportion for any period during which artificial light other than electric light is employed for illuminating purposes, and may by like order, as regards any particular manufacturing process or handicraft, substitute for the said figures of two hundred and fifty and four hundred respectively any higher figures, and thereupon this section shall have effect as modified by the order.

(3.) Section seventy-eight of the principal Act shall be read as if there were included among the notices required by that section to be affixed a notice specifying the number of persons who may be employed in each room of the factory or workshop by virtue of this section.

Power to make order as to dangerous factory or workshop.

2.—(1). A court of summary jurisdiction may, on complaint by an inspector, and on being satisfied that any place used as a factory or workshop or as part of a factory or workshop is in such a condition that any manufacturing process or handicraft carried on therein cannot be so carried on without danger to health or to life or limb, by order, prohibit the place from being used for the purpose of that process or handicraft, until such works have been executed as are in the opinion of the court necessary to remove the danger.

(2). Provided that proceedings shall not be taken under this section in cases where proceedings might be taken by or at the instance of any sanitary authority under the provisions of the law relating to public health, unless the inspector is authorised to take proceedings in pursuance of section one or section two of the Act of 1891.

(3). If there is any contravention of an order under this section the occupier of the place shall be liable to a fine not exceeding forty shillings a day during such contravention.

Provision as to notice to sanitary authority.

3.—(1). Where notice of an act, neglect, or default is given by an inspector under section four of the principal Act to a sanitary authority, it shall be the duty of the sanitary authority to inform the inspector of the proceedings taken in consequence of the notice.

(2). In section two of the act of 1891, for the words "within a reasonable time" shall be substituted the words "within one month."

Penalty for allowing wearing apparel to be made in place where there is infectious disease.

6. If any occupier of a factory or workshop or laundry or of any place from which any work is given out, or any contractor employed by any such occupier, causes or allows wearing apparel to be made, cleaned, or repaired in any dwelling-house or building occupied therewith, whilst any inmate of the dwelling-house is suffering from scarlet fever or small-pox, then, unless he proves that he was not aware of the existence of the illness in the dwelling-house, and could not reasonably have been expected to become aware of it, he shall be liable to a fine not exceeding ten pounds.

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SPECIAL RULES AND REQUIREMENTS.

Laundries.

Application of Factory Acts to laundries.

22.—(1). In any laundry carried on by way of trade, or for purpose of gain, the following provisions shall apply :—

(i.) The period of employment, exclusive of meal hours and absence of work, shall not exceed, for children, ten hours, for young persons, twelve hours, for women, fourteen hours, in any consecutive twenty-four hours ; nor a total for children of thirty hours, for young persons and women of sixty hours, in any one week, in addition to such overtime as may be allowed in the case of women

(iv.) So far as regards sanitary provisions, safety, accidents, the affixing of notices and abstracts and the matters to be specified in such notices (so far as they apply to laundries), notice of occupation of a factory or workshop, powers of inspectors, fines, and legal proceedings for any failure to comply with the provisions of this section, and education of children, the Factory

Acts shall have effect as if every laundry in which steam, water, or other mechanical power is used in aid of the laundry process were a factory, and every other laundry were a workshop; and as if every occupier of a laundry were the occupier of a factory or of a workshop.

(vi.) Sections seventeen and eighteen of the Act of 1891 shall apply to laundries in like manner as to factories or workshops.

(2). In the case of every laundry worked by steam, water, or other mechanical power—

(*a*) A fan or other means of a proper construction shall be provided, maintained, and used for regulating the temperature in every ironing-room, and for carrying away the steam in every washhouse in the laundry; and

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(*b*) all stoves for heating irons shall be sufficiently separated from any ironing-room, and gas-irons emitting any noxious fumes shall not be used; and

(*c*) the floors shall be kept in good condition and drained in such manner as will allow the water to flow off freely.

A laundry in which these provisions are contravened shall be deemed to be a factory not kept in conformity with the principal Act.

Bakehouses.

Provisions as to bakehouses.

27.—(1.) Sections thirty-four and thirty-five of the principal Act shall apply to every bakehouse, and so much of those sections as limits the operation thereof to cities, towns, and places having a population of more than five thousand persons shall be repealed.

46 & 47 Vict. c. 53.

(2). In section fifteen of the Factory and Workshop Act, 1883, the words, "which was not so let or occupied before the first day of June, one thousand eight hundred and eighty-three," shall be repealed.

(3). A place under ground shall not be used as a bakehouse unless it is so used at the commencement of this Act, and if any place is so used in contravention of this Act it shall be deemed to be a workshop not kept in conformity with the principal Act.

Special Provisions for Health.

Notification of certain diseases to chief inspector.

29.—(1). Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or anthrax, contracted in any factory or workshop, shall (unless the notice required by this section has been previously sent) send to the Chief Inspector of Factories at the Home Office, London, a notice stating the name and full postal address of the patient and the disease from which in the opinion of the medical practitioner the patient is suffering and shall be entitled in respect of every notice sent in pursuance of this section to a fee of two shillings and sixpence to be paid as part of the expenses incurred by the Secretary of State in the execution of the principal Act.

(2). If any medical practitioner, when required by this section to send a notice, fails forthwith to send the same, he shall be liable to a fine not exceeding forty shillings.

(3). Written notice of every case of lead, phosphorus, or arsenical poisoning, or anthrax, occuring in a factory or workshop, shall forthwith be sent to the inspector and to the certifying surgeon for the district; and the provisions of the Factory Acts with respect to accidents shall apply to any such case in like manner as to any such accident as is in those sections mentioned.

(4). The Secretary of State may by order made in accordance with section sixty-five of the principal Act apply the provisions of this section to any other disease occurring in a factory or workshop, and thereupon this section and the provisions referred to therein shall apply accordingly.

Lavatories in dangerous trades.

30.—(1). In every factory or workshop where lead, arsenic, or any other poisonous substance is used, suitable washing conveniences shall be provided for the use of the persons employed in any department where such substances are used.

(2). A factory or workshop in which there is a contravention of this section shall be deemed not to be kept in conformity with the principal Act.

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Provisions as to humid factories.

52 & 53 Vict. c. 62.

31.—(1), The Cotton Cloth Factories Act, 1889, shall apply to every textile factory in which atmospheric humidity is artificially produced by steaming or other mechanical appliances, and which is not for the time being subject to special rules under section eight of the Act of 1891, with such modifications of the schedule with respect to the maximum limits of humidity as the Secretary of State by order made in accordance with section sixty-five of the principal Act may direct.

(2). In section nine of the Cotton Cloth Factories Act, 1889, the words "and the arrangements for such ventilation shall be kept in operation subject, as far as possible, to the control of the persons employed therein," shall be repealed.

Temperature in factories and workshops.

32.—(1.) In every factory and workshop adequate measures shall be taken for securing and maintaining a reasonable temperature in each room in which any person is employed.

Amendment of 41 & 42 Vict. c. 16, s. 36, as to use of fans.

33.—Section thirty-six of the principal Act shall extend to any factory or workshop where any process is carried on by which any gas, vapour, or other impurity is generated and inhaled by the workers to an injurious extent

A.D. 1895.

Notice of existing workshops.

41.—Every person who is in occupation of a workshop at the commencement of this Act shall before the expiration of twelve months from the commencement of this Act, unless he has already done so in pursuance of section twenty-six of the Act of 1891, serve on the inspector for the district a written notice containing the name of the workshop, the place where it is situate, the address to which he desires his letters to be addressed, the nature of the work, and the name of the person or firm under which the business of the workshop is carried on, and in default shall be liable to a fine not exceeding five pounds. Any notice so served shall be forthwith forwarded to the sanitary authority of the district in which the workshop is situate.

In many respects this will be a valuable addition to legislation regulating factories and workshops. It seems a pity that the cubic space should have been fixed at such a low figure as 250 cubic feet, and, in section 6, Small Pox and Scarlet Fever should be the only diseases mentioned.

The conversion of mill privies to water closets has been steadily going on, and now there are very few left which can be drained to a sewer

The ventilation of workshops, especially those of tailors, has been considerably improved.

WORKSHOPS

Trades.	No. of Workshops.	No. of Workrooms.	No. of Employees at time of Inspectors Visit.			No. of Visits.
			Males.	Females.	Total.	
Bass Dressers	1	1	5	—	5	2
Brush Makers	6	16	31	1	32	61
Cabinet Makers & Upholsterers	16	32	99	1	100	135
Chair Makers	2	5	6	—	6	16
Chain Makers	1	1	2	—	2	8
Cloggers and Shoemakers	58	66	129	—	129	470
Clog Sole Makers	2	2	5	-	5	16
Coach Builders & Coach Painters	5	10	55	—	55	49
Coopers	2	2	7	—	7	13
Cotton Waste Dealers	3	10	7	3	10	28
Curriers and Leather Dressers	3	10	10	3	13	26
Hosiers and Underclothiers	9	14	—	91	91	75
Herb Beer Makers	5	14	21	2	23	52
Joiners	12	15	54	—	54	107
Milliners and Dressmakers	77	90	—	371	371	682
Paper Bag Makers	2	6	4	21	25	19
Picture Framers	5	12	20	—	20	48
Saddlers	10	14	33	—	33	98
Sausage & Black Pudding Makers	19	26	33	—	33	144
Skip Makers	2	3	8	—	8	13
Stocking Knitters	6	6	2	12	14	51
Tailors	63	107	252	49	301	490
Tinners	8	12	41	—	41	76
Weighing Machine Makers	2	2	10	—	10	17
Wire Workers	1	2	6	—	6	7
Wheelwrights	5	6	16	—	16	42
Ticket Writers	2	4	3	—	3	9

WORKSHOPS.

Total number of visits	2754
Number of rooms	488
Number of Workshops in which the space was less than 250 cubic feet per person	9
Number of Rooms in which the space was less than 250 cubic feet per person	12
Number of Workshops with insufficient ventilation	9
Number found dirty	35
Number with defective and leaky drains	2
Number with closets out of order	8
Gullies made up	19
Notices served	66
Defective slop pipes	4
Smoke test applied	1
Accumulation of refuse	1
Insufficient closet accommodation	1

BAKEHOUSES.

Number of Bakehouses	114
Number of visits	666
In good condition	110
Below ground	24
With closets in close communication	2
Badly ventilated	24
Badly lighted	9
Drains removed	1
Drains disconnected	1
Closets removed	1
Number dirty and requiring limewashing	34
Smoke test applied	2
Gullies removed	1
Notices served	42
Defective roofs	2
No proper receptacle for manure	1
Accumulation of ashes	1

FACTORIES.

Number of Factories	120
Number of Visits	276

The following is the description of the sanitary accomodation :—

	NO. OF FACTORIES
Water Closets only	79
Water Closets and Privies	17
Privies only—Inside the Shed	6
„ In the Yard	7
Tubs—Insde the Shed	2
„ In the yard	5
Water Closets and Tubs	2
Privies and Tubs	2

Ordered by the Committee to be converted from Privies to Water Closets	9
Ordered to provide more closet accommodation	2

MEAT AND FISH INSPECTOR'S REPORT.

YEAR ENDING DECEMBER 31st, 1895.

Visits to Butchers' Shops	9453
Visits to Private Slaughterhouses	3166
Visits to Fish Curing Houses	306

NUMBER OF ANIMALS SLAUGHTERED AT THE PUBLIC SLAUGHTERHOUSES.

Beasts, 4,240 ; Calves, 1,381 ; Sheep, 28.118 ; Pigs, 4,655.

MEAT AND FISH CONDEMNED AND DESTROYED.

72 Carcases of Beef (30 Tubercular)
2 Hind quarters of Beef
26 Pieces of Beef
1,190lbs. of Beef.
5 Sheep
12 Calves
8 Pigs
1 Deer
126 Rabbits
28 Barrels of Gurnets
4 Boxes of Gurnets
93 Barrels of Ray
11½ Kits of Ray
553 Boxes of Herrings
2 Boxes of Ray
31½ Bags of Cockles
49 Bags of Mussels
5½ Boxes of Codfish

2 Barrels of Sprones
2½ Barrels of Eels
9 Boxes of Bloaters
28 Boxes of Plaice
186 Boxes of Haddock
1 Box of Hake
7 Boxes of Halibut
6 Barrels Shrimps
1 Basket of Shrimps
½ Kit Cat Fish
1½ Kit Mixed Fish

WILLIAM HARRISON,

Meat and Fish Inspector.

REPORT OF INSPECTOR OF NUISANCES.

Health Office,
51 Ainsworth Street,
Blackburn.

To the Medical Officer of Health.

Dear Sir,—I beg to submit to you the following report of the sanitary work for the year 1895.

INSPECTION OF FOOD.

Number of Articles purchased and submitted for Analysis.	Name.	Quality.		Proceedings
		Genuine.	Adult'd.	
104	Milk ...	45	2	Two Summon's issued. Each fined 20/- and costs
	Butter...	17	...	
	Lard ...	19	...	
	Coffee...	11	...	
	Ground Ginger	3	3	Three Summon's issued, but each withdrawn on payment of costs
	Whiskey	4	...	
		99	5	

Inhabited Vans.—The dwelling vans, also the tents erected on fair grounds, &c., have been regularly inspected for the purpose of noting their sanitary condition. The vans and tents were found to be kept very clean, and also free from infectious disease.

Offensive Trades.—The offensive trades established within the Borough have been frequently visited and found generally satisfactory.

Canal Boats.—189 registered canal boats have been inspected and reported upon during the past year, and five new boats added to the register. The total number of boats registered is 124.

During the 189 inspections enumerated there were found ten infringements of the Acts. Notices were issued in each case, but as the defects were remedied in the time allowed, no further proceedings were taken.

The total number of persons found living on the canal boats were 471, viz.: 336 men, 103 women, and 32 children—24 of the children being under school age.

The boats were found clean and entirely free from infectious disease.

Common Lodging Houses.—The Common Lodging Houses have been frequently visited during the year. The number at present on the register is 55, accommodating 1,021 adults and 84 children.

During the year—

One house has been registered.
Three houses have had the number of lodgers varied.
Seven houses have been re-registered owing to change of keeper.

Complaints Received from the Public.—408 complaints of alleged nuisances have been received. These have been investigated, and the necessary action taken for their abatement.

Examination of Drains.—

Drains examined with smoke machine, 361.
Do. by excavation, 96.
Drains found defective, 270.

Smoke Observations. — 95 smoke observations were taken, of which 21 exceeded the limit of seven minutes. 15 notices to abate the nuisance caused by the emission of black smoke were served, and six prosecutions ordered.

Disinfection.—The following work has been carried out for preventing the spread of infectious disease :—

483 Houses Fumigated,
Total number of Rooms Fumigated, 557.
16 Schools Fumigated.
Total number of School Rooms Fumigated, 71.

In 199 Houses the internal surfaces of the walls, ceilings, and floors have been washed with disinfectant and stripped of paper.

At 478 houses disinfectants were distributed, and 1,526 collections were made of sanitary pails containing infected matter.

The following articles have been disinfected by steam :—

517	Beds,
608	Mattresses,
434	Bolsters,
683	Pillows,
618	Quilts,
668	Blankets,
414	Sheets,
231	Suits of Clothes,
184	Carpets,
120	Rugs,
124	Curtains,
1527	Sundries.

The following infected articles have been destroyed :—

13 Beds,
28 Mattresses,
3 Pillows,
1 Bolster,
1 Blanket,
1 Sheet,
53 Sundries.

DESCRIPTION OF VISITS.

Districts—	1	2	3	TOTAL.
Dwelling-houses Inspected	4473	4173	4519	13165
Visits to Infected Houses	664	1247	695	2606
,, Common Lodging Houses...	70	764	428	1262
,, Dairies & Cowsheds	113	35	32	180
,, Work in progress	358	1380	2234	3972
,, Common Yards, Passages, Back Roads, etc. ...	2804	2793	3382	8979
,, Horse Manure Middens	576	900	608	2084

Work reported to and visited by the Health Committee.

Districts—	1	2	3
Dilapidated houses	3	25	14
Houses closed as unfit for habitation	13	3	8
Back to back houses	13	28	14
Insanitary cowsheds	18	5	5
Manure receptacles against dwellings	2	3	4
Cellar dwellings	2	12	...
Offensive trade premises	1	...	1
Imperfect drainage and manure receptacles	9	4	1
Unflagged yards and passages	1	10	18
Insanitary cellar areas	...	2	...
Unpaved and undrained yards	10	13	14
Defective house drains	18	40	12
Insanitary piggeries	...	3	...
Premises unfit for preparation of food	...	6	1
Insanitary privies	51	54	73
Insufficient closet accommodation	...	1	3
Houses for demolition	13	...	7

DESCRIPTION OF NOTICES ISSUED AND NUISANCES REMEDIED.

District—	1	2	3	TOTAL.
Public Health Act Notices issued...	81	139	75	295
Preliminary Notices issued	413	310	259	982
Notices to Day and Sunday Schools 533	......	......	......	......
Notices to Library and School Board 224	......	......	......	......
Water Closets and Drains opened and repaired...........................	124	157	129	410
Downspouts, Slopstone Pipes, Easing Troughs repaired	77	101	97	275
Slopstone Pipes disconnected from sewer....................................	50	28	32	110
Ashtubs provided and repaired......	50	90	20	160
Ashpits repaired	5	11	5	21
Dwelling-houses whitewashed	84	52	84	220
Roofs repaired..........................	13	44	35	92
Walls, Ceilings repaired	1	6	39	46
Ventilation of Bedrooms improved	3	7	13	23
House Walls painted	1	6	19	26
Pavement around Gullies repaired	14	32	12	58
Yards flagged and repaired	11	4	28	43
Accumulation of Refuse removed ...	29	13	25	67
Houses, Cellars, Yards and Closets cleansed	30	34	30	94
Poultry (filthily kept) removed from premises	6	2	3	11
Street Gullies reported to Scavengers	54	55	15	124
Ashpits and Tubs „ ...	41	147	118	306
Overcrowding remedied.................	1	8	2	11
Horse Manure Middens emptied ...	503	828	531	1862

OTHER MAGISTERIAL PROCEEDINGS.

Under Section 126 of the Public Health Act, 1875, two. persons were proceeded against.

One person was fined 1s. and costs for allowing a child whilst it was in an infectious state from scarlet fever to enter a shop.

Another person was fined 1s. and costs for transmitting clothing infected with scarlet fever.

A magistrate's order was also granted for the removal and burial of the body of a child who had died from measles and was a danger to the public health.

For a breach of the Dairies, Cowsheds, and Milkshops' Regulations one person was proceeded against and ordered to pay costs.

Four summonses were taken out for preparing and exposing for sale diseased meat.

One person was fined £20 and costs for exposing for sale diseased meat, also £20 and costs for having diseased meat in his slaughterhouse.

Another person was fined £5 and costs for having diseased meat in his slaughterhouse; also fined £5 and costs for slaughtering on unauthorised premises.

An order from the magistrates was obtained for the destruction of 5cwts. of plums which were seized as unfit for human food.

Three summonses were issued under section 91 of the Public Health Act—two for keeping pigs so as to be a nuisance.

One person was fined 20s. and costs

Another person was ordered to pay costs and to abate the nuisance within 14 days

An order from the magistrates was obtained to abate the nuisance caused by occupying premises unfit for use as a bakehouse. This decision was subsequently overruled on appeal.

Six summonses were also issued under section 91 of the Public Health Act, 1865, for the emission of black smoke so as to be a nuisance :—

One person fined £5 and costs and ordered to abate within seven days.

Two persons fined 10s. and costs and ordered to abate within eight weeks.

One person fined £3 and costs and ordered to abate within four weeks.

One person ordered to pay costs and ordered to abate within four weeks.

One person ordered to pay costs and ordered to abate within eight weeks.

For offences against Common Lodging House Bye-laws four summonses were issued :—

One lodginghouse-keeper was ordered to pay costs.

One lodginghouse-keeper was fined 20s. and costs.

One lodginghouse-keeper was fined £5 and costs on the first summons, and ordered to pay the costs of the second summons.

I am, Sir, yours obediently,

F. POOL.

Assoc. San. Inst.

APPENDIX A.

DEATHS Registered, and causes thereof, in the County Borough of Blackburn, during the year 1895, from January 1st to December 31st, inclusive.

CAUSES OF DEATH. CLASSES.	SEX TOTAL		AGES. 0 to 1		1 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 35		35 to 45		45 to 55		55 to 60		60 to 65		65 to 75		75 & up.		Total under 5 years		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1 Specific Febrile or Zymotic Diseases	543	570	197	193	192	203	17	24	4	7	12	11	15	16	26	39	28	31	17	14	11	10	9	10	10	8	5	4	398	396	1113
2 Parasitic Diseases	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
3 Dietic Diseases	19	13	12	10	2	2	..	..	..	..	..	..	..	..	..	1	..	..	4	..	1	..	..	...	..	..	..	..	14	12	32
4 Constitutional Diseases	52	68	5	2	..	..	2	1	..	..	1	3	1	1	2	7	4	11	8	15	11	7	7	9	8	9	3	3	5	2	120
5 Developmental Diseases	101	108	63	52	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	15	18	22	32	63	53	209
6 Local Diseases	709	692	181	121	99	79	21	11	9	11	15	12	13	14	25	41	59	58	77	91	51	46	39	57	91	103	29	48	280	200	1401
7 Deaths from Violence	34	29	4	2	8	5	2	4	3	..	..	1	..	2	4	..	5	..	2	5	2	2	2	2	1	2	1	4	12	7	63
8 Deaths from ill-defined and not specified causes	83	62	42	35	5	5	2	2	..	..	..	..	..	..	1	2	5	5	12	7	4	2	7	1	4	2	1	1	47	40	145
TOTALS	1541	1543	504	416	306	295	44	42	16	18	28	27	29	33	58	90	101	105	120	132	80	67	65	84	129	142	61	92	810	711	3084
Class 1.—SPECIFIC FEBRILE or ZYMOTIC DISEASES.																															
1.—Miasmatic Diseases.																															
Small Pox — Vaccinated		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small Pox — Not Vaccinated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small Pox — No Statement	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	153	171	40	33	109	128	3	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	149	161	324
Scarlet Fever	4	2	..	..	4	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	8
Typhus	..	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	30	41	13	20	17	19	..	2	..	..	..		..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	30	39	71
Diphtheria	1	6	..	1	..	2	..	2	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	7
Croup	11	6	2	..	7	4	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	4	17
Simple continued or ill-defined Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric or Typhoid Fever	12	16	..	..	..	1	3	2	..	1	2	2	3	2	3	5	1	1	..	1	..	..	..	1	..	..	..	..	..	1	28
Tuberculosis.																															
a General Tuberculosis	20	24	7	8	7	6	2	3	..	..	..	1	2	1	1	..	..	2	..	2	..	1	1	..	..	..	..	..	14	14	44

b Phthisis	78	82	1	1	2	4	1	1	2	5	3	5	9	10	19	26	18	21	13	3	7	1	2	4	1	1	..	..	3	5	160
c Abdominal Tuberculosis	33	22	16	12	13	8	2	..	..	..	..	..	..	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	29	20	55
d Tubercular Meningitis Acute Hydrocephalus	19	6	6	4	8	2	2	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	6	25
e Other forms of Tuberculosis	7	5	2	2	3	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	.	..	..	..	..	..	5	3	12
Influenza	29	25	..	1	..	1	..	..	..	..	2	..	1	..	3	2	6	3	3	5	1	6	6	3	5	4	2	..	..	2	54
Other Miasmatic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2.—Diarrhœal Diseases.																															
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa Dysentery	132	148	102	109	22	26	..	1	..	1	..	..	..	..	..	1	..	..	..	1	1	2	..	2	4	3	3	2	124	135	280
3.—Malarial Diseases.																															
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous Diseases.																															
Cow Pox and effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases (e.g. Hydrophobia, Glanders, and Splenic Fever)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.																															
Syphilis	6	1	5	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	5	1	7
Gonorrhæ Stricture of Urethra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6.—Septic Diseases																															
Erysipelas	2	5	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	2	1	1	7
Pyæmia Septicæmia	4	3	2	..	..	..	..	..	..	..	2	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2	..	7
Puerperal Fever	..	7	..	..	..	..	..	..	..	..	..	3	..	2	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	7
TOTALS	543	570	197	193	192	203	17	24	4	7	12	11	15	16	26	39	28	31	17	14	11	10	9	10	10	8	5	4	389	396	1113
Class 2.—PARASITIC DISEASES.																															
Thrush and other Vegetable Parasitic Diseases	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Worms, Hydatids, & other Animal Parasitic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
TOTALS	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	2	2

CAUSES OF DEATH. CLASSES.	SEX TOTAL		AGES. 0 to 1		1 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 35		35 to 45		45 to 55		55 to 60		60 to 65		65 to 75		75 & up.		Total under 5 years		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Class 3.—DIETIC DISEASES.																															
Want of Breast Milk	14	12	12	10	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	12	26
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Alcoholism	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	4	..	1	..	..	..	..	..	..	..	..	..	6
Delirium Tremens	..	..	..	..	...		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS	19	13	12	10	2	2	..	..	..	..	..	..	..	..		1	..	..	4	..	1	..	..	..	..	..	..	..	14	12	32
Class 4.—CONSTITUTIONAL DISEASES.																															
Rheumatic Fever, Rheumatism of the Heart	1	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	3
Rheumatism	6	6	..	..	..	..	..	1	..	..	1	1	1	..	2	..	1	3	..	..	..	..	..	..	1	1	..	..	..	..	12
Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cancer, Malignant Disease	33	48	..	1	..	..	1	..	..	..	..	1	..	..	..	3	2	3	8	15	10	6	5	9	5	8	2	2	..	1	81
Purpura, Hæmorrhagic Diathesis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anæmia Chlorosis Leucocythæmia	6	6	5	1	..	..	..	..	..	..	..	..	..	..	..	2	1	2	..	..	..	..	..	..	..	..	..	1	5	1	12
Glycosuria, Diabetes Mellitus	5	5	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	..	..	1	..	2	..	2	..	..	..	..	..	10
Other Constitutional Diseases	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2
TOTALS	52	68	5	2	..		2	1	..	..	1	3	1	1	2	7	4	11	8	15	11	7	7	9	8	9	3	3	5	2	120
Class 5.—DEVELOPMENTAL.																															
Premature Birth	56	46	56	46	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	56	46	102
Atelectasis	4	4	4	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	8
Congenial Malformations	3	3	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	6
Old Age	38	55	..		..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	1	5	15	18	22	32	..	..	93
TOTALS	101	108	63	52	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	15	18	22	32	63	53	209

Class 6.—LOCAL DISEASES.

1.—Diseases of the Nervous System.																															
Inflammation of the Brain or Membranes	38	16	10	6	18	6	4	1	1	..	1	1	..	..	..	1	1	..	1	..	1	1	1	..	..	..	..	..	28	12	54
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	51	64	..	..	2	1	..		..	..	..	..	.	..	..	..	2	3	10	10	6	4	10	15	17	21	4	10	2	1	115
Insanity, General Paralysis of the Insane	..	1	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	.	..	1
Epilepsy	6	8	..	..	..	..	1	..	1	1	1	..	1	..	..	3	1	1	..	..	1	..	..	..	..	2	..	1	..	..	14
Convulsions	43	29	38	25	5	4	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	43	29	72
Laryngismus Stridulus (Spasm of Glottis)	6	2	5	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	2	8
Disease of Spinal Cord, Paraplegia Paralysis Agitans	30	14	1	1	2	..	..	..	..	..	..	..	..	..	1	..	2	3	1	4	2	1	2	2	13	2	6	1	3	1	44
Other Diseases of Nervous System	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
2.—Diseases of Organs of Special Sense (e.g.)																															
Of Ear, Eye, Nose	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
3.—Diseases of the Circulatory System.																															
Pericarditis	..	..	..	..	..	..	..	..	..		..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..
Acute Endocarditis	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..		..	..	..	2
Valvular Diseases of Heart	9	9	..	..	..	..	2	..	..	1	1	..	1	..	2	1	2	1	..	..		1	..	1	1	2	..	2	..	..	18
Other Diseases of Heart	60	79	2	..	2	..	1	3	1	2	3	4	2	3	2	6	4	12	12	13	13	8	4	9	13	14	1	5	4	..	139
Aneurism	3	2	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	5
Embolism Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Blood Vessels	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
4.—Diseases of Respiratory System.																															
Laryngitis	1	2	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
Emphysema, Asthma	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	.	..	..	..	..	..	..	..	1
Bronchitis	156	193	44	35	26	29	3	1	..	..	1	..	1	..	2	1	7	5	15	23	10	18	7	18	27	44	13	19	70	64	349
Pneumonia	142	87	32	12	21	19	6	5	2	4	3	1	4	3	12	6	21	5	18	8	5	9	6	4	11	5	1	6	53	31	229
Pleurisy	4	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	1	1	..	..	..	..	5
Other Diseases of Respiratory System	1	..	..	..	..	...		..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	.	..	..	1
5.—Diseases of Digestive System.																															
Dentition	28	16	15	11	13	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	16	44
Sore Throat, Quinsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of Stomach	11	13	3	..	1	2	..	..	..	..	1	1	1	..	1	1	1	1	1	6	1	..	..	1	1	1	..	..	4	2	24
Enteritis	43	40	25	26	5	4	1	1	..	..	1	..	..	1	1	1	3	2	4	1	..	1	3	1	..	2	..	..	30	30	83
Obstructive Diseases of Intestine	4	4	..	1	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	1	1	..	..	1	8
Peritonitis	8	17	2	..	..	..	..	..	1	1	1	3	1	1	1	6	..	3	..	3	2	..	..	..	..	..	..	..	2	..	25

CAUSES OF DEATHS. CLASSES.	SEX TOTAL		AGES 0 to 1		1 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 35		35 to 45		45 to 55		55 to 65		60 to 65		65 to 75		75 & up.		Total under 5 years		Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
DISEASES OF DIGESTIVE SYSTEM—Continued.																															
Ascites		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..
Cirrhosis of Liver	21	8	..	..	..	..	..	..	..	..	..	..	..	..	I	..	5	2	6	2	3	I	2	2	3	I	I	..	..	..	29
Jaundice and other Diseases of Liver	4	3	I	I	..	..	..	..	..	..	..	..	..	..		..	..	.	I	I	..	.	I	..	I	I	..	..	I	I	7
Other Diseases of Digestive System	3	3	..	I	I	..	..	..	..	..	..	..	..	..	I	..	..	..	..	I	I	..	..	..	..	..	..	I	I	I	6
6.—Diseases of Lymphatic System (e.g.)																															
Of Lymphatics and Spleen	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7.—Diseases of Gland-like Organs of Uncertain Use (e.g.)																															
Bronchocele, Addison's Disease	I	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	I	I	..	I	..	..	..	..	..		..		..	..	3
8.—Diseases of Urinary System																															
Acute Nephritis	4	12	..	2	..	I	..	..	I	I	..		..	..	..	2	I	..	..	4	I	..	I	..		I	..	I	..	3	16
Bright's Diseases, Albuminuria	8	22	..	..	..	I	..	..	I	..	..	..	..	I	..	I	3	5	I	8	3	..	..	2		3	..	I	..	I	30
Disease of Bladder or of Prostate	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	2	..	..	..	6
Other Diseases of Urinary System	5	5	..	..	I	..	..	..	..		..	..	..	..	..	..	..	..	..	3	2	..	2	..	..	2	..	..	I	..	10
9.—Diseases of Reproductive System.																															
a Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Male Organs	2	..	..	..	..	..	..	..	..	..	..		I	.		..	..	..	I	..	..	..	..	..	..	..	..	..	..	..	2
Female Organs	..	6	..	..	..	..	..	..	..	..	..	..	..	I	..	I	..	I	..	2	..	I	..	..	..	..	..	..	..	..	6
b Of Parturition	..	I	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..	..	..	I
Abortion Miscarriage	..	3	..	..	..	..	..	..	..	..		..	..	..	..	2	..	I	..	..	..	..	..	..	..	..	..	..	..	..	3
Puerperal Convulsions	..	..	..	..	..	..	..	..	..	..	..		..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Placenta Prævia Flooding	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	I	..	5	..	..	..	..	..	..	..	..	..	..	..	..	6
Other Accidents of Childbirth	..	13	..	..	..	..	..	..	..	..	..	..	..	3	..	6	..	4	..	..	..	..	..	..	.	..	..	..	..	..	13

10.—Diseases of Joints and Bones.																															
Caries Necrosis	6	2	2	..	1	1	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	8
Arthritis, Ostitis, Periositis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..
Other Diseases of Joints and Bones	1	5	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	1	6
11.—Diseases of Integumentary System.																															
Carbuncle Cellulitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of Integumentary System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS	709	692	181	121	99	79	21	11	9	11	15	12	13	14	25	41	59	58	77	91	51	46	39	57	91	103	29	48	280	200	1401
Class 7.—DEATHS FROM VIOLENCE.																															
1.—Accident or Negligence.																															
Fractures and Contusions	12	11	1	..	3	2	1	..	1	..	..	..	..	..	2	..	1	..	..	2	1	1	1	1	..	1	1	4	4	2	23
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..
Cut, Stab	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..
Burn, Scald	8	9	..	..	5	2	1	4	1	..	..	..	..		1	..	..	..	..	..	..	1	..	1	..	1	..	..	5	2	17
Poison	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..		..	..	..		..		..	2
Drowning	1	.	..	..	..	..	..	..	1	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Suffocation	4	1	3	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..		..	3	1	5
Otherwise	..	..	..		..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2.—Homicide.																															
Manslaughter	..	1	..	1	..		..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..		..	1	1
Murder	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
3.—Suicide.																															
Gunshot Wounds	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..		..	2
Cut, Stab	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Poison	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2
Drowning	1	2	..	..	..	..		..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	3

CAUSES OF DEATH. CLASSES.	SEX TOTAL		AGES																										Total under 5 years		Total
			0 to 1		1 to 5		5 to 10		10 to 15		15 to 20		20 to 25		25 to 35		35 to 45		45 to 55		55 to 60		60 to 65		65 to 75		75 & up.				
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
SUICIDE—Continued.																															
Hanging	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	1	..	..	..	..		4
Otherwise	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..
4.—Execution.																															
Hanging	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS	34	29	4	2	8	5	2	4	3	..	..	1	..	2	4	..	5	..	2	5	2	2	2	2	1	2	1	4	12	7	63
Class 8.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.																															
Dropsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility Atrophy Inanition	23	24	21	24	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	22	24	47
Mortification	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tumour	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..		..	..	..	..	..	..	2
Abscess	5	3	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	3	1	..	..	1		..	..	..	..	..	1	8
Hæmorrhage	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	1	..	..	4
Other Ill-defined Causes	8	7	4	4	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	1	..	..	2	..			4	4	15
Causes unspecified, Inquest	16	7	4	3	3	..	..	1	..	..	..	..	..	..	..	1	..	1	6	..	..	..	2	1	..	..	1	..	7	3	23
Do, do. no Inquest	29	17	13	4	1	4	2	..	..	..	..		..	..	..	1	4	1	3	4	3	1	1	..	2	2	..	..	14	8	46
TOTALS	83	62	42	35	5	5	2	2	..	..	..	..	..	..	1	2	5	5	12	7	4	2	7	1	4	2	1	1	47	40	145

APPENDIX B.

Deaths and Death Rates in Enumeration Districts, from January 1st to December 31st, 1895.

District.	Population.	Deaths From								Death Rate 1895	Death Rate 1889 to 1895
		Scarlet Fever	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
1	615	...	...	1	1	...	1	13	16	26·0	30·4
2	696	...	...	...	...	1	2	10	13	18·6	24·0
3	1009	...	...	3	2	4	9	16	34	33·6	36·3
4	901	...	...	3	11	...	5	14	33	36·6	26·0
5	635	...	1	3	5	2	7	9	27	42·5	35·0
6	1101	...	...	4	4	4	7	21	40	36·3	23·4
7	1230	...	...	5	10	3	9	24	51	41·4	32·7
8	1040	...	...	3	3	...	5	18	29	27·8	25·2
9	883	...	...	2	2	1	2	12	19	21·5	20·8
10	955	...	1	5	3	...	4	4	17	17.8	22·4
11	1113	...	2	3	5	3	6	22	41	36·8	36·1
12	1349	...	...	5	6	1	10	28	50	37·0	28·6
13	794	...	...	...	1	4	1	12	18	22·6	19.6
14	953	...	1	1	1	2	7	8	20	20·9	15·7
15	899	...	2	2	4	1	3	8	20	22·2	22·4
16	1219	1	1	4	8	1	3	19	37	30·3	26·9
17	972	...	...	1	...	1	7	13	22	22·6	26·1
18	1238	...	...	2	4	2	8	16	32	27·4	24·5
19	1398	...	...	4	9	1	7	21	42	30·0	23·6
20	944	...	...	1	2	...	6	12	21	22·2	27·3
21	1102	...	...	5	4	2	7	10	28	25·4	24·2

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts, from January 1st to December 31st, 1895.

District.	Population.	Deaths From.								Death Rate 1895	Death Rate 1889 to 1895.
		Scarlet Fever.	Typhoid.	Diarrhœa.	Other Zymotic.	Phthisis	Other Lungs.	All Others.	All Causes.		
22	788		...	3	9	1	6	8	27	34·2	22·6
23	688	...	...	1	1	1	3	7	13	18·8	19·1
24	1265	...	..	6	1	3	...	15	25	19·7	22 4
25	1431	...	1	5	14	...	11	21	52	34·9	31·3
26	930	...	...	2	5	4	3	16	30	32·2	24·1
27	2010	...	...	10	8	...	11	23	52	25·8	20·1
28	1333	...	...	3	...	2	1	10	16	12·0	13·8
29	589	...	..	1	1	1	1	7	11	18·6	18 9
30	899	...	...	7	2	...	4	10	23	25·5	24·6
31	1364	...	...	3	8	2	2	13	28	20·5	22·5
32	1349	...	...	1	4	...	2	18	25	18·5	16·6
33	714	...	...	1	3	1	6	10	21	29·4	25.0
34	969	...	...	4	2	...	6	11	23	23·7	19·7
35	549	...	...	1	1	...	2	11	15	27·3	18 9
36	1164		2	1	7	3	2	10	25	21·4	17·7
37	1053	...	...	3	4	1	3	13	24	22·7	23·4
38	1320	...	1	4	6	2	7	12	32	24·2	20·4
39	1081	...	...	1	4	3	6	12	26	24·0	24·9
40	931	...	2	1	5	3	9	16	36	38·6	27·4
41	693	...	...	2	3	...	5	8	18	25·9	26·3
42	1082	...	...	5	4	1	3	19	32	29·5	26·9

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts from January 1st to December 31st, 1895.

District	Populotion	Deaths From.								Death Rate 1895	Death Rate 1889 to 1895
		Scarlet Fever	Typhoid Fever	Diarrhœa	Other Zymotic	Phthisis	Other Lungs.	All Others.	All Causes.		
43	1386	...		6	5	4	7	27	49	5·3	31·8
44	511	...	...	1	1	...	4	9	15	29·3	33·8
45	695	...	...	3	...	...	7	15	25	35·9	28·7
46	715	...	1	1	1	3	6	11	23	32·1	42·3
47	693	...	...	2	2	...	5	11	20	28·8	36·2
48	1144	...	...	4	1	4	3	17	29	25·3	24·6
49	1108		...		4	1	5	17	27	24·3	19·2
50	1025	...	...	2	3	2	5	14	26	25·3	22·7
51	1152	...		6	11	6	10	22	55	47·7	30·2
52	1332	...	...	1	3	1	3	9	17	12·7	18·6
53	1025	...	1	2	6	1	6	13	29	28·2	19·9
54	1116	...	...	4	4	...	6	12	26	23·2	18·3
55	1217	...	..	2	5	...	6	11	24	19·7	22·6
56	1095	...	...	1	9	...	2	17	29	26·4	29·6
57	1581	...	...	...	3	..	8	20	31	19·6	18·5
58	766	...	...	1	4	1	2	10	18	23·4	31·5
59	1056	...	...	4	2	1	4	16	27	25·5	25·4
60	956	1	..	2	1	2	2	18	26	27·1	30·9
61	1500	...	1	5	6	...	5	9	26	17·3	20·6
62	805	...	...	3	2	...	7	11	23	28·5	26·4
63	946	...	...	4	5	1	5	14	29	30·6	28·6

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts from January 1st to December 31st, 1895.

District.	Population.	DEATHS FROM								Death Rate 1895.	Death Rate 1889 to 1895.
		Scarlet Fever.	Typhoid.	Diarrhœa.	Other Zymotic.	Phthisis	Other Lungs	All Others.	All Causes.		
64	794	...	...	2	4	2	1	11	20	25·1	18·3
65	724		...	6	3	1	7	10	27	37·2	31·3
66	1278	...	1	5	10	4	9	15	44	34·4	34·2
67	1306	..		2	6	2	8	13	31	23·7	22·9
68	1595	...	..	10	11	...	11	33	65	40·7	25·8
69	1302	...	...	2	6	1	4	10	23	17·6	16·4
70	1678	1	..	4	10	...	9	22	46	27·4	27·2
71	1603		...	1	7	...	4	33	45	28·0	26·0
72	955		...	..	3	2	4	14	23	24·0	13·1
73	907	...	...	1	..	1	5	14	21	23·1	25·8
74	596	...	...	2	5	1	4	11	23	38·5	33·0
75	1023	...	...	2	7	1	6	8	24	23·4	16·8
76	901	2	...	4	2	2	7	12	29	32·1	36·8
77	913	...	...	3	2	3	3	14	25	27·3	16·5
78	609	...	...	...	...	5	2	8	15	24·6	40·1
79	955	...	...	1	1	2	4	9	17	17·8	24·9
80	830	...	1	2	1	2	7	12	25	30·1	25·3
81	1222	...	...		2	...	2	9	13	10·6	12·2
82	1063	...	..	3	4	2	6	19	34	31·9	34·6
83	1088	...	...	3	3	1	4	15	26	23·8	21·1
84	986	...	...	...	3	...	4	18	25	25·3	21·1

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts from January 1st to December 31st, 1896.

District.	Population.	Deaths From.								Death Rate 1895	Death Rate 1889 to 1895
		Scarlet Fever.	Typhoid	Diarrhœa	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
85	1203	...	1	1	3	1	3	8	17	14·1	18·1
86	693	...	...	2	6	1	7	6	22	31·7	28·4
87	1019	...	...	1	3	3	5	11	23	22·5	16·4
88	1104	...	...	1	5	...	2	9	17	15·3	9·9
89	849	...	...	2	3	1	4	10	20	21·0	22·4
90	1163	...	...	1	5	1	2	10	19	16·3	24·4
91	1074	1	...	3	4	...	12	21	41	37·6	19·0
92	1432	...	1	...	7	3	10	13	34	23·7	23·5
93	1276	...	...	1	2	1	4	5	13	10·1	16·1
94	1195	...		...	3	...	1	8	12	10·0	8.8
95	781	...	1	1	2	...	4	9	17	21·7	23·7
96	764	...	...	1	...	...	3	9	13	17·0	17·3
97	1203	...	1	...	2	...	8	12	23	19·1	14·7
98	924	...	...	...	1	1	6	12	20	21·6	12·3
99	931	...	...	1	3	...	1	8	13	13·9	14·2
100	514	...	...	1	1	1	...	7	10	19·4	23·3
101	539	...	1	...	1	1	3	2	8	14·8	19·3
102	651	...	...	2	1	...	4	11	18	27·6	18·6
103	1233	...	1	1	9	2	3	13	29	23·5	22·0
104	1455	...	...	5	7	2	8	28	50	34·3	25·9
105	1235	...	...	5	8	1	5	15	34	27·5	24·6

APPENDIX B.—Continued.

Deaths and Death Rates in Enumeration Districts from January 1st to December 31st, 1895.

District	Population.	Deaths From								Death Rate 1895	Death Rate 1889 to 1895
		Scarlet Fever	Typhoid	Diarrhœa.	Other Zymotic	Phthisis	Other Lungs	All Others	All Causes		
106	1101	...	1	2	7	...	4	13	27	24·5	18·1
107	1500	..	1	1	3	1	7	17	30	20·0	17·0
108	1650	...		4	5	.	6	26	41	24·8	21·2
109	1758	...		2	7	2	10	25	46	26·1	19·9
110	1237	...		4	8	1	11	24	48	38·7	22·1
111	1202	...		6	9	1	7	19	42	34·9	25·6
112	1365	...		1	5	4	5	10	27	19·7	17·6
113	796	...		2		...	1	8	11	13·8	12 5

The position of the districts are shown on the first map.

This table of death-rates is getting less trustworthy each year. The rates are calculated on the population of the 1891 census, and no satisfactory attempt can be made to estimate the increase or decrease of the one or more districts. In calculating the death-rates of the whole town this does not make any very material difference, but in small districts the effect may be very marked. The older and badly built parts of the town are gradually becoming depopulated, whereas the healthier surrounding districts are being built upon. This no doubt to some extent explains the extraordinary decrease in the death-rates of districts such as 78, 46 and 47. Still it is a fact that these districts have improved very materially in their sanitary condition during the last five years.

The importance of the age distribution of the population in these districts is important. This is well illustrated by district 78, in which there were no deaths from any of the zymotic diseases, indicating very clearly that this district contains very few children. Its unhealthiness is quite apparent from the fact that one-third of the total deaths were due to phthisis, the death-rate for this cause being 8.

APPENDIX C.

BOROUGH, 1895.	Card Room Hands	Spinners	Spinning and Card Masters	Weavers M.	Weavers F.	Winders Warpers Tapers, Loomers, and Drawers	Overlookers	Cotton Warehouse		Paper Makers	Factory Hands (not Paper nor Cotton)	Engine Tenters	Coal Miners	Bricklayers' Labourers	Labourers in Cotton Mills.	Labourers	Carters, Draymen, and Cabmen	Grooms and Horse-keepers	Foundrymen	Butchers	Bakers&Confectioners	Shopkeepers	Tailors	Boot and Shoe Makers	Masons and Builders	Carpenters and Joiners	Plumbers and Painters	Hotel Keepers and Publicans	Farmers	Gardeners	Printers and Compositors	Teachers	Clerks	Manufacturers	Professional Men	General Servants	House Wives	Others		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	COTTON.																																							
Zymotic Diseases.																																								
Under 1	6	23	...	64	...	4	16	7	...	1	4	1	8	2	1	55	15	3	25	4	3	21	2	4	12	10	10	2	...	2	1	...	8	...	4	...	...	7	...	...
1 ,, 5	5	25	...	73	...	15	20	7	...	...	16	7	5	1	1	68	17	3	21	1	3	12	4	5	10	4	9	1	1	1	...	...	6	...	1	3	...	1	...	...
5 ,, 15	...	2	...	4	1	2	...	...	...	...	1	...	...	...	...	7	3	...	4	...	...	1	2	...	5	...	1	1	...	...	...	...	2	...	1	...	...	...	...	...
15 ,, 25	1	3	...	4	2	3	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	...	...	...
25 ,, 35	...	...	...	...	2	1	...	...	...	...	1	...	...	...	...	2	1	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	1	...	...	...	7	...	...	...
35 ,, 45	...	1	...	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...	1	...	4	...	...	...
45 ,, 55	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	6	...	...	...
55 ,, 65	1	...	...	2	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	3	...	...	...	2	1	1	...	...	...	...	2	...	...	...	12	...	...	...
65 and upwards	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	5	...	1	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	...	1	...	11	2	...	...
Totals	13	54	...	148	6	29	37	14	...	1	23	10	13	3	4	140	36	7	51	6	6	38	8	9	30	20	21	6	1	3	1	1	22	...	8	4	42	10	...	...
Cancer.																																								
Under 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
35 ,, 45	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
45 ,, 55	...	2	...	2	1	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	11	...	...	...
55 ,, 65	...	...	...	1	1	3	...	...	...	...	...	...	...	...	...	4	...	...	1	...	...	2	...	...	...	1	...	...	...	...	...	...	1	...	...	...	13	...	...	...
65 and upwards	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	8	1	...	...
Totals	...	2	...	5	2	6	...	...	...	...	1	2	1	...	...	4	...	...	2	...	...	2	...	2	...	1	...	...	...	...	...	...	2	...	1	3	37	1	...	...
Nervous Diseases other than Convulsions.																																								
Under 1	...	2	...	6	...	2	2	1	...	...	...	...	2	...	...	3	1	...	3	...	...	3	...	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	8	...	...	3	2	...	...	...	...	...	...	...	3	2	1	1	1	...	2	1	1	2	3	1	1	...	...	...	...	1	...	...	...	...	...	...	...
5 ,, 15	...	1	...	1	1	1	2	...	...	...	1	...	...	...	...	1	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...
25 ,, 35	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
35 ,, 45	1	...	...	...	2	1	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...	...	4	1	...	...
45 ,, 55	...	1	...	...	1	3	...	1	...	...	...	...	...	...	...	5	...	...	1	1	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	14	...	...	...
55 ,, 65	1	2	...	6	2	1	...	...	...	...	...	...	...	...	...	7	...	...	5	...	...	3	...	...	2	...	...	...	...	...	...	...	...	...	...	1	14	1	...	...
65 and upwards	2	3	...	4	2	...	...	1	...	...	2	...	1	...	...	10	2	...	5	...	...	4	...	...	1	...	...	1	1	1	...	...	...	1	...	1	35	3	...	...
Totals	4	9	...	25	10	9	7	5	...	...	3	...	3	...	...	30	7	1	18	2	...	16	2	1	6	3	4	4	1	1	2	1	2	1	...	3	69	6	...	...
Tubercular Diseases.																																								
Under 1	1	1	...	12	...	4	2	...	...	...	2	...	...	...	...	5	2	...	5	3	...	1	1	...	2	2	2	...	...	...	...	...	...	...	2	2	...	1	...	...
1 ,, 5	...	1	...	5	...	1	3	1	...	...	2	1	1	...	...	10	3	1	1	...	...	3	...	...	1	1	1	...	...	...	...	1	2	...	1	1	...	...	...	...
5 ,, 15	...	...	...	...	1	...	1	...	...	...	1	1	...	...	...	2	1	...	...	...	...	1	...	...	...	1	...	...	...	1	...	...	2	...	...	...	...	...	...	...
15 ,, 25	...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
25 ,, 35	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 ,, 45	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
45 ,, 55	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	1	3	...	22	4	7	6	1	...	...	6	2	1	...	...	18	7	1	6	3	...	5	1	1	3	4	3	...	...	1	...	1	4	...	3	4	4	1	...	...
Other Respiratory Diseases.																																								
Under 1	3	8	...	18	...	6	3	2	...	...	...	5	1	...	...	26	5	1	8	1	...	6	...	1	4	7	2	1	...	...	2	...	5	1	1	2	...	...	...	...
1 ,, 5	2	5	...	20	...	6	8	1	...	...	...	...	1	...	1	12	6	...	7	...	...	1	2	3	6	1	3	1	...	...	...	...	7	...	...	2	...	1	...	...
5 ,, 15	...	2	...	3	1	...	...	1	...	1	1	1	...	...	...	4	1	...	1	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	1	...	...
15 ,, 25	...	...	...	2	2	1	...	...	...	...	1	...	...	...	...	3	1	...	1	1	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...
25 ,, 35	...	1	...	4	2	3	...	...	...	...	...	...	1	...	...	1	...	1	2	...	1	1	...	1	1	1	...	...	...	...	...	...	...	...	...	...	4	...	...	...
35 ,, 45	1	3	...	3	2	...	...	2	...	...	2	...	...	2	1	5	2	...	1	2	...	1	...	...	3	1	...	1	...	...	1	...	...	...	...	...	5	...	...	...
45 ,, 55	1	2	1	4	2	3	...	2	...	...	1	1	...	...	1	13	3	...	2	...	1	2	2	...	2	3	2	1	...	...	...	...	1	...	...	3	20	...	...	...
55 ,, 65	...	1	...	5	2	5	...	...	...	1	2	...	1	...	...	10	...	...	1	...	...	4	1	...	2	...	...	1	...	...	...	...	1	...	1	1	36	2	...	...
65 and upwards	2	3	...	5	1	1	1	1	...	...	1	...	1	...	...	14	5	...	3	...	...	5	...	1	...	1	2	2	4	...	...	1	3	...	...	2	62	4	...	...
Totals	9	25	1	64	12	25	12	9	...	2	8	7	5	2	3	88	23	2	26	4	2	21	5	6	18	16	12	7	4	...	3	1	17	1	2	10	128	8	...	...
Diseases of Heart and Circulatory System.																																								
Under 1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	3	...	...	...	2	3	...	...	...	1	...	...	...	...	3	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	1	...	5	6	...	...	1	...	...	...	...	...	...	...	2	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	1	...	...	1	4	1	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...
35 ,, 45	2	...	...	2	5	1	1	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	1	...	...	...	...	...	...	1	...	1	...	9	...	...	...
45 ,, 55	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	3	1	...	2	...	...	1	...	...	1	2	...	...	...	...	...	...	1	...	...	...	13	...	...	...
55 ,, 65	1	...	...	2	1	...	1	...	...	...	...	...	...	...	...	4	1	...	4	...	...	2	...	...	1	2	...	...	...	...	...	...	...	1	...	...	19	1	...	...
65 and upwards	...	2	...	1	...	...	1	...	...	...	...	...	...	...	...	4	...	...	2	...	...	4	...	1	...	...	...	...	2	...	...	...	...	...	...	1	21	1	...	...
Totals	4	7	...	12	18	4	6	1	...	1	1	...	...	...	...	18	4	1	11	...	...	9	...	1	4	7	...	1	2	...	...	...	3	1	1	1	64	2	...	...
Diseases of Digestive System.																																								
Under 1	...	6	...	23	...	3	...	...	...	...	...	...	...	1	1	9	3	...	2	1	1	2	...	...	6	1	1	...	...	...	...	...	3	...	1	1	...	...	...	...
1 ,, 5	1	1	...	3	...	1	...	...	...	...	1	1	...	...	...	4	...	...	2	...	...	2	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...
15 ,, 25	...	...	...	1	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	...
35 ,, 45	1	1	...	2	1	1	...	...	...	...	1	...	...	...	1	...	...	...	2	...	...	4	...	1	...	...	...	1	...	...	...	...	...	...	...	1	7	...	...	...
45 ,, 55	...	1	...	3	...	...	...	1	...	...	...	...	...	...	...	3	...	...	...	1	1	2	...	...	1	3	...	1	...	...	...	...	...	...	1	1	10	...	...	...
55 ,, 65	1	1	...	1	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	1	...	1	...	...	...	...	1	...	1	...	6	...	...	...
65 and upwards	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	1	...	2	...	1	...	1	1	...	...	...	1	...	...	...	...	1	...	1	...	6	...	...	...
Totals	3	11	...	36	10	9	1	1	...	...	2	1	...	1	2	19	5	...	11	2	3	14	1	3	8	6	3	4	...	...	1	...	5	...	5	3	33	1	...	...
Diseases of Urinary System.																																								
Under 1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ,, 15	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
35 ,, 45	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	...
45 ,, 55	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	1	10	...	...	...
55 ,, 65	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	2	1	...	...
65 and upwards	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	8	2	...	...
Totals	1	...	...	7	2	3	...	...	...	...	1	1	...	...	...	2	1	1	2	...	...	2	1	...	2	...	1	2	...	...	...	...	1	...	1	3	23	3	...	...
Premature Birth, Marasmus, etc., Teething, Convulsions																																								
Under 1	6	21	...	53	...	16	7	8	...	...	6	4	4	...	2	27	15	3	15	4	1	10	...	1	5	5	6	4	...	1	1	...	7	...	4	7	...	1	...	...
1 ,, 5	...	3	...	1	...	1	3	2	...	...	2	...	...	...	...	4	3	1	...	...	...	1	1	...	1	4	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Totals	6	24	...	54		17	10	10	...	...	8	4	4	...	2	31	18	4	15	4	1	11	1	1	6	9	6	4	...	1	1	...	7	...	4	9	...	1	...	...
Old Age.																																								
Totals	2	2	...	3	...	3	...	1	...	...	1	...	...	...	...	16	...	...	3	...	2	2	...	...	1	—	...	5	2	...	...	...	...	...	1	3	45	5	...	...
Violent Deaths.																																								
Under 1	1	...	...	1	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
1 ,, 5	...	2	...	...	...	1	...	...	...	...	1	...	...	...	...	4	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...
5 ,, 15	...	1	...	1	...	2	...	...	...	...	1	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15 ,, 25	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35 ,, 45	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
45 ,, 55	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	4	...	...	...
65 and upwards	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
Totals	2	4	...	5	2	6	...	...	...	...	2	...	...	...	...	14	1	1	1	1	...	2	...	...	...	2	1	...	...	...	...	...	2	...	...	...	13	1	...	...
Phthisis.																																								
Under 1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ,, 5	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...
5 ,, 15	...	1	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
15 ,, 25	1	4	...	6	5	4	...	1	...	...	2	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...
25 ,, 35	1	5	...	3	9	1	...	1	...	...	1	1	...	...	...	2	...	1	1	...	...	1	...	1	...	...	1	...	...	...	...	1	2	...	...	1	10	...	...	...
35 ,, 45	...	2	...	5	4	3	...	1	...	...	1	...	...	...	...	...	...	...	3	1	...	2	...	...	1	1	...	...	...	...	...	...	2	...	1	1	9	1	...	...
45 ,, 55	...	...	...	1	...	2	...	...	...	...	1	...	...	...	...	2	...	...	2	...	...	...	1	...	1	2	...	...	...	...	...	...	1	...	1	...	3	...	...	...
55 ,, 65	...	...	...	1	1	1	...	...	...	...	1	...	...	...	...	3	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	3	1	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Totals	2	13	...	19	19	11	1	4	...	...	7	1	1	...	...	10	2	1	9	1	...	3	2	1	5	5	1	...	...	...	...	2	8	...	2	2	28	2	...	...
All Others.																																								
Under 1	...	7	...	13	...	6	2	1	...	...	3	...	...	...	...	9	4	...	4	...	...	4	1	2	1	4	1	...	...	...	...	...	...	1	...	1	...	1	...	...
1 ,, 5	...	...	...	5	...	...	1	...	...	...	...	...	...	...	...	1	...	...	2	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...
5 ,, 15	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...
15 ,, 25	...	...	...	2	3	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25 ,, 35	1	1	...	...	4	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	...	...	6	...	...	...
35 ,, 45	1	...	...	2	2	1	1	...	...	...	...	1	...	...	...	1	...	...	...	...	1	1	...	1	...	1	...	...	...	...	...	...	...	...	...	2	13	...	...	...
45 ,, 55	...	2	...	1	1	...	1	...	...	...	1	...	...	...	...	...	...	...	3	...	...	1	...	...	1	2	1	1	...	...	...	...	...	...	...	1	7	...	...	...
55 ,, 65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...	1	2	...	...	...	...	...	...	...	...	2	...	...	...	4	...	...	...
65 and upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	4	1	...	...
Totals	2	11	...	23	10	11	5	1	...	...	4	1	...	...	...	16	4	...	12	...	2	7	3	7	2	11	2	2	...	...	...	...	3	1	...	6	34	3	...	...
All Causes.																																								
Under 1	17	69	...	192	...	43	33	19	...	1	15	10	15	3	4	135	46	7	62	13	5	46	4	8	31	29	23	9	...	3	4	1	23	2	12	13	...	11	...	...
1 ,, 5	8	38	...	116	...	25	38	13	...	...	22	9	7	1	2	109	30	6	36	2	4	23	9	10	21	19	16	3	1	1	...	1	18	...	2	9	...	3	...	...
5 ,, 15	...	12	...	10	5	8	7	2	...	1	8	2	...	...	...	20	8	...	11	...	...	3	4	...	6	5	3	1	...	1	1	...	6	...	2	1	...	1	...	...
15 ,, 25	2	9	...	23	28	12	...	2	...	...	3	1	1	...	...	9	3	1	2	1	...	4	1	1	...	2	2	...	...	...	1	1	...	...	...	...	7	1	...	...
25 ,, 35	3	7	...	12	27	13	...	1	...	...	2	1	1	...	...	9	1	2	5	...	1	6	...	2	2	1	1	2	...	...	...	2	5	...	...	3	37	1	...	...
35 ,, 45	6	7	...	16	18	9	2	3	...	1	4	3	...	2	4	9	4	...	8	4	1	11	...	2	7	4	1	3	...	...	1	...	5	...	3	5	58	2	...	...
45 ,, 55	2	9	1	12	7	14	1	4	...	...	4	1	1	...	1	30	6	2	12	3	2	8	3	1	7	14	4	4	...	...	1	...	5	...	2	10	99	...	...	...
55 ,, 65	5	4	...	22	7	10	2	1	...	1	4	...	1	...	...	31	2	...	15	...	...	17	2	1	7	6	2	4	...	...	...	...	9	1	2	2	111	6	...	...
65 and upwards	6	10	...	20	3	7	2	2	...	...	5	2	2	...	...	54	8	2	15	...	2	15	1	7	4	4	2	9	9	1	...	1	5	1	5	8	208	19	...	...
Totals	49	165	1	423	95	141	85	47	...	4	67	29	28	6	11	406	108	20	166	23	15	133	24	32	85	84	54	35	10	6	8	6	76	4	28	51	520	44	...	...